104TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
1st Session } { 104–390

NATIONAL TECHNOLOGY TRANSFER AND ADVANCEMENT ACT OF 1995

DECEMBER 7, 1995.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. WALKER, from the Committee on Science,

submitted the following

R E P O R T

together with

ADDITIONAL VIEWS

[To accompany H.R. 2196]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 2196) to amend the Stevenson-Wydler Technology Innovation Act of 1980 with respect to inventions made under cooperative research and development agreements, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

CONTENTS

I. AMENDMENT

The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Technology Transfer and Advancement Act of 1995".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Bringing technology and industrial innovation to the marketplace is central to the economic, environmental, and social well-being of the people of the United States.

(2) The Federal Government can help United States business to speed the development of new products and processes by entering into cooperative research and development agreements which make available the assistance of Federal laboratories to the private sector, but the commercialization of technology and industrial innovation in the United States depends upon actions by business.

(3) The commercialization of technology and industrial innovation in the United States will be enhanced if companies, in return for reasonable compensation to the Federal Government, can more easily obtain exclusive licenses to inventions which develop as a result of cooperative research with scientists employed by Federal laboratories.

SEC. 3. USE OF FEDERAL TECHNOLOGY.

Subparagraph (B) of section 11(e)(7) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(e)(7)(B)) is amended to read as follows:

"(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if the amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000.".

SEC. 4. TITLE TO INTELLECTUAL PROPERTY ARISING FROM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

Subsection (b) of section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(b)) is amended to read as follows:

"(b) ENUMERATED AUTHORITY.—(1) Under an agreement entered into pursuant to subsection (a)(1), the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under the agreement, for reasonable compensation when appropriate. The laboratory shall ensure, through such agreement, that the collaborating party has the option to choose an exclusive license for a field of use for any such invention under the agreement or, if there is more than one collaborating party, that the collaborating parties are offered the option to hold licensing rights that collectively encompass the rights that would be held under such an exclusive license by one party. In consideration for the Government's contribution under the agreement, grants under this paragraph shall be subject to the following explicit conditions:

"(A) A nonexclusive, nontransferable, irrevocable, paid-up license from the collaborating party to the laboratory to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of section 552(b)(4) of title 5, United States Code, or which would be considered as such if it had been obtained from a non-Federal party.

"(B) If a laboratory assigns title or grants an exclusive license to such an invention, the Government shall retain the right—

"(i) to require the collaborating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in the applicant's licensed field of use, on terms that are reasonable under the circumstances; or

"(ii) if the collaborating party fails to grant such a license, to grant the license itself.

"(C) The Government may exercise its right retained under subparagraphs (B) (ii) and (iii) only if the Government finds that—

"(i) the action is necessary to meet health or safety needs that are not reasonably satisfied by the collaborating party;

"(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the collaborating party; or

"(iii) the collaborating party has failed to comply with an agreement containing provisions described in subsection (c)(4)(B).

"(2) Under agreements entered into pursuant to subsection (a)(1), the laboratory shall ensure that a collaborating party may retain title to any invention made solely by its employee in exchange for normally granting the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government for research or other Government purposes.

"(3) Under an agreement entered into pursuant to subsection (a)(1), a laboratory may—

"(A) accept, retain, and use funds, personnel, services, and property from a collaborating party and provide personnel, services, and property to a collaborating party;

"(B) use funds received from a collaborating party in accordance with subparagraph (A) to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency;

"(C) to the extent consistent with any applicable agency requirements or standards of conduct, permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government; and

"(D) waive, subject to reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of a collaborating party.

"(4) A collaborating party in an exclusive license in any invention made under an agreement entered into pursuant to subsection (a)(1) shall have the right of enforcement under chapter 29 of title 35, United States Code.

"(5) A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement pursuant to subsection (a)(1) may use or obligate royalties or other income accruing to the laboratory under such agreement with respect to any invention only—

"(A) for payments to inventors;

"(B) for a purposes described in clauses (i), (ii), (iii), and (iv) of section 14(a)(1)(B); and

"(C) for scientific research and development consistent with the research and development missions and objectives of the laboratory.".

SEC. 5. DISTRIBUTION OF INCOME FROM INTELLECTUAL PROPERTY RECEIVED BY FEDERAL LABORATORIES.

Section 14 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710c) is amended—

(1) by amending subsection (a)(1) to read as follows:

"(1) Except as provided in paragraphs (2) and (4), any royalties or other payments received by a Federal agency from the licensing and assignment of inventions under agreements entered into by Federal laboratories under section 12, and from the licensing of inventions of Federal laboratories under section 207 of title 35, United States Code, or under any other provision of law, shall be retained by the laboratory which produced the invention and shall be disposed of as follows:

"(A)(i) The head of the agency or laboratory, or such individual's designee, shall pay each year the first $2,000, and thereafter at least 15 percent, of the royalties or other payments to the inventor or coinventors.

"(ii) An agency or laboratory may provide appropriate incentives, from royalties, or other payments, to laboratory employees who are not an inventor of such inventions but who substantially increased the technical value of such inventions.

"(iii) The agency or laboratory shall retain the royalties and other payments received from an invention until the agency or laboratory makes payments to employees of a laboratory under clause (i) or (ii).

"(B) The balance of the royalties or other payments shall be transferred by the agency to its laboratories, with the majority share of the royalties or other payments from any invention going to the laboratory where the invention occurred. The royalties or other payments so transferred to any laboratory may be used or obligated by that laboratory during the fiscal year in which they are received or during the succeeding fiscal year—

"(i) to reward scientific, engineering, and technical employees of the laboratory, including developers of sensitive or classified technology, regardless of whether the technology has commercial applications;

"(ii) to further scientific exchange among the laboratories of the agency;

"(iii) for education and training of employees consistent with the research and development missions and objectives of the agency or laboratory, and for other activities that increase the potential for transfer of the technology of the laboratories of the agency;

"(iv) for payment of expenses incidental to the administration and licensing of intellectual property by the agency or laboratory with respect to inventions made at that laboratory, including the fees or other costs for the services of other agencies, persons, or organizations for intellectual property management and licensing services; or

"(v) for scientific research and development consistent with the research and development missions and objectives of the laboratory.

"(C) All royalties or other payments retained by the agency or laboratory after payments have been made pursuant to subparagraphs (A) and (B) that is unobligated and unexpended at the end of the second fiscal year succeeding the fiscal year in which the royalties and other payments were received shall be paid into the Treasury.";

(2) in subsection (a)(2)—

(A) by inserting "or other payments" after "royalties"; and

(B) by striking "for the purposes described in clauses (i) through (iv) of paragraph (1)(B) during that fiscal year or the succeeding fiscal year" and inserting in lieu thereof "under paragraph (1)(B)";

(3) in subsection (a)(3), by striking "$100,000" both places it appears and inserting "$150,000";

(4) in subsection (a)(4)—

(A) by striking "income" each place it appears and inserting in lieu thereof "payments";

(B) by striking "the payment of royalties to inventors" in the first sentence thereof and inserting in lieu thereof "payments to inventors";

(C) by striking "clause (i) of paragraph (1)(B)" and inserting in lieu thereof "clause (iv) of paragraph (1)(B)";

(D) by striking "payment of the royalties," in the second sentence thereof and inserting in lieu thereof "offsetting the payments to inventors,"; and

(E) by striking "clauses (i) through (iv) of"; and

(5) by amending paragraph (1) of subsection (b) to read as follows:

"(1) by a contractor, grantee, or participant, or an employee of a contractor, grantee, or participant, in an agreement or other arrangement with the agency, or".

SEC. 6. EMPLOYEE ACTIVITIES.

Section 15(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710d(a)) is amended—

(1) by striking "the right of ownership to an invention under this Act" and inserting in lieu thereof "ownership of or the right of ownership to an invention made by a Federal employee"; and

(2) by inserting "obtain or" after "the Government, to".

SEC. 7. AMENDMENT TO BAYH–DOLE ACT.

Section 210(e) of title 35, United States Code, is amended by striking ", as amended by the Federal Technology Transfer Act of 1986,".

SEC. 8. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT AMENDMENTS.

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended—

(1) in section 10(a)—

(A) by striking "nine" and inserting in lieu thereof "15"; and

(B) by striking "five" and inserting in lieu thereof "10";

(2) in section 15—

(A) by striking "Pay Act of 1945; and" and inserting in lieu thereof "Pay Act of 1945;"; and

(B) by inserting "; and (h) the provision of transportation services for employees of the Institute between the facilities of the Institute and nearby public transportation, notwithstanding section 1344 of title 31, United States Code" after "interests of the Government"; and

(3) in section 19, by striking "nor more than forty" and inserting in lieu thereof "nor more than 60".

SEC. 9. RESEARCH EQUIPMENT.

Section 11(i) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(i)) is amended—

(1) by inserting "loan, lease," after "department, may"; and

(2) by inserting "Actions taken under this subsection shall not be subject to Federal requirements on the disposal of property." after "education and research activities.".

SEC. 10. PERSONNEL.

The personnel management demonstration project established under section 10 of the National Bureau of Standards Authorization Act for Fiscal Year 1987 (15 U.S.C. 275 note) is extended indefinitely.

SEC. 11. FASTENER QUALITY ACT AMENDMENTS.

(a) SECTION 2 AMENDMENTS.—Section 2 of the Fastener Quality Act (15 U.S.C. 5401) is amended—

(1) by striking subsection (a)(4), and redesignating paragraphs (5) through (9) as paragraphs (4) through (8), respectively;

(2) in subsection (a)(7), as so redesignated by paragraph (1) of this subsection, by striking "by lot number"; and

(3) in subsection (b), by striking "used in critical applications" and inserting in lieu thereof "in commerce".

(b) SECTION 3 AMENDMENTS.—Section 3 of the Fastener Quality Act (15 U.S.C. 5402) is amended—

(1) in paragraph (1)(B) by striking "having a minimum tensile strength of 150,000 pounds per square inch" and inserting in lieu thereof "having a minimum Rockwell C hardness of 40 or above";

(2) in paragraph (2), by inserting "consensus" after "or any other";

(3) in paragraph (5)—

(A) by inserting "or" after "standard or specification," in subparagraph (B);

(B) by striking "or" at the end of subparagraph (C);

(C) by striking subparagraph (D); and

(D) by inserting "or produced in accordance with ASTM F 432" after "307 Grade A";

(4) in paragraph (6) by striking "other person" and inserting in lieu thereof "government agency";

(5) in paragraph (8) by striking "Standard" and inserting in lieu thereof "Standards";

(6) by striking paragraph (11) and redesignating paragraphs (12) through (15) as paragraphs (11) through (14), respectively;

(7) in paragraph (13), as so redesignated by paragraph (6) of this subsection, by striking ", a government agency" and all that follows through "markings of any fastener" and inserting in lieu thereof "or a government agency"; and

(8) in paragraph (14), as so redesignated by paragraph (6) of this subsection, by inserting "for the purpose of achieving a uniform hardness" after "quenching and tempering".

(c) SECTION 4 REPEAL.—Section 4 of the Fastener Quality Act (15 U.S.C. 5403) is repealed.

(d) SECTION 5 AMENDMENTS.—Section 5 of the Fastener Quality Act (15 U.S.C. 5404) is amended—

(1) in subsection (a)(1)(B) and (2)(A)(i) by striking "subsections (b) and (c)" and inserting in lieu thereof "subsections (b), (c), and (d)";

(2) in subsection (c)(2) by striking "or, where applicable" and all that follows through "section 7(c)(1)";

(3) in subsection (c)(3) by striking ", such as the chemical, dimensional, physical, mechanical, and any other";

(4) in subsection (c)(4) by inserting "except as provided in subsection (d)," before "state whether"; and

(5) by adding at the end the following new subsection:

"(d) ALTERNATIVE PROCEDURE FOR CHEMICAL CHARACTERISTICS.—Notwithstanding the requirements of subsections (b) and (c), a manufacturer shall be deemed to have demonstrated, for purposes of subsection (a)(1), that the chemical characteristics of a lot conform to the standards and specifications to which the manufacturer represents such lot has been manufactured if the following requirements are met:

"(1) The coil or heat number of metal from which such lot was fabricated has been inspected and tested with respect to its chemical characteristics by a laboratory accredited in accordance with the procedures and conditions specified by the Secretary under section 6.

"(2) Such laboratory has provided to the manufacturer, either directly or through the metal manufacturer, a written inspection and testing report, which shall be in a form prescribed by the Secretary by regulation, listing the chemical characteristics of such coil or heat number.

"(3) The report described in paragraph (2) indicates that the chemical characteristics of such coil or heat number conform to those required by the standards and specifications to which the manufacturer represents such lot has been manufactured.

"(4) The manufacturer demonstrates that such lot has been fabricated from the coil or heat number of metal to which the report described in paragraphs (2) and (3) relates.

In prescribing the form of report required by subsection (c), the Secretary shall provide for an alternative to the statement required by subsection (c)(4), insofar as such statement pertains to chemical characteristics, for cases in which a manufacturer elects to use the procedure permitted by this subsection.".

(e) SECTION 6 AMENDMENT.—Section 6(a)(1) of the Fastener Quality Act (15 U.S.C. 5405(a)(1)) is amended by striking "Within 180 days after the date of enactment of this Act, the" and inserting in lieu thereof "The".

(f) SECTION 7 AMENDMENTS.—Section 7 of the Fastener Quality Act (15 U.S.C. 5406) is amended—

(1) by amending subsection (a) to read as follows:

"(a) DOMESTICALLY PRODUCED FASTENERS.—It shall be unlawful for a manufacturer to sell any shipment of fasteners covered by this Act which are manufactured in the United States unless the fasteners—

"(1) have been manufactured according to the requirements of the applicable standards and specifications and have been inspected and tested by a lab-

oratory accredited in accordance with the procedures and conditions specified by the Secretary under section 6; and

"(2) an original laboratory testing report described in section 5(c) and a manufacturer's certificate of conformance are on file with the manufacturer, or under such custody as may be prescribed by the Secretary, and available for inspection.";

(2) in subsection (c)(2) by inserting "to the same" after "in the same manner and";

(3) in subsection (d)(1) by striking "certificate" and inserting in lieu thereof "test report"; and

(4) by striking subsections (e), (f), and (g) and inserting in lieu thereof the following:

"(e) COMMINGLING.—It shall be unlawful for any manufacturer, importer, or private label distributor to commingle like fasteners from different lots in the same container, except that such manufacturer, importer, or private label distributor may commingle like fasteners of the same type, grade, and dimension from not more than two tested and certified lots in the same container during repackaging and plating operations. Any container which contains fasteners from two lots shall be conspicuously marked with the lot identification numbers of both lots.

"(f) SUBSEQUENT PURCHASER.—If a person who purchases fasteners for any purpose so requests either prior to the sale or at the time of sale, the seller shall conspicuously mark the container of the fasteners with the lot number from which such fasteners were taken.".

(g) SECTION 9 AMENDMENT.—Section 9 of the Fastener Quality Act (15 U.S.C. 5408) is amended by adding at the end the following new subsection:

"(d) ENFORCEMENT.—The Secretary may designate officers or employees of the Department of Commerce to conduct investigations pursuant to this Act. In conducting such investigations, those officers or employees may, to the extent necessary or appropriate to the enforcement of this Act, exercise such authorities as are conferred upon them by other laws of the United States, subject to policies and procedures approved by the Attorney General.".

(h) SECTION 10 AMENDMENTS.—Section 10 of the Fastener Quality Act (15 U.S.C. 5409) is amended—

(1) in subsections (a) and (b), by striking "10 years" and inserting in lieu thereof "5 years"; and

(2) in subsection (b), by striking "any subsequent" and inserting in lieu thereof "the subsequent".

(i) SECTION 13 AMENDMENT.—Section 13 of the Fastener Quality Act (15 U.S.C. 5412) is amended by striking "within 180 days after the date of enactment of this Act".

(j) SECTION 14 REPEAL.—Section 14 of the Fastener Quality Act (15 U.S.C. 5413) is repealed.

SEC. 12. STANDARDS CONFORMITY.

(a) USE OF STANDARDS.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) in paragraph (2), by striking ", including comparing standards" and all that follows through "Federal Government";

(2) by redesignating paragraphs (3) through (11) as paragraphs (4) through (12), respectively; and

(3) by inserting after paragraph (2) the following new paragraph:

"(3) to compare standards used in scientific investigations, engineering, manufacturing, commerce, industry, and educational institutions with the standards adopted or recognized by the Federal Government and to coordinate the use by Federal agencies of private sector standards, emphasizing where possible the use of standards developed by private, consensus organizations;".

(b) CONFORMITY ASSESSMENT ACTIVITIES.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) by striking "and" at the end of paragraph (11), as so redesignated by subsection (a)(2) of this section;

(2) by striking the period at the end of paragraph (12), as so redesignated by subsection (a)(2) of this section, and inserting in lieu thereof "; and"; and

(3) by adding at the end the following new paragraph:

"(13) to coordinate Federal, State, local, and private sector standards conformity assessment activities, with the goal of eliminating unnecessary duplication and complexity in the development and promulgation of conformity assessment requirements and measures.".

(c) TRANSMITTAL OF PLAN TO CONGRESS.—The National Institute of Standards and Technology shall, by January 1, 1996, transmit to the Congress a plan for implementing the amendments made by this section.

(d) UTILIZATION OF CONSENSUS STANDARDS BY FEDERAL AGENCIES; REPORTS.—(1) To the extent practicable, all Federal agencies and departments shall use, for procurement and regulatory applications, standards that are developed or adopted by voluntary consensus standards bodies.

(2) Federal agencies and departments shall consult with voluntary, private sector, consensus standards bodies, and shall participate with such bodies in the development of standards, as appropriate in carrying out paragraph (1).

(3) If a Federal agency or department elects to use, for procurement or regulatory applications, standards that are not developed or adopted by voluntary consensus standards bodies, the head of such agency or department shall transmit to the Office of Management and Budget an explanation of the reasons for adopting such standards. The Office of Management and Budget shall annually transmit to the Congress all explanations received by it under this subsection.

SEC. 13. SENSE OF CONGRESS.

It is the sense of the Congress that the Malcolm Baldrige National Quality Award program offers substantial benefits to United States industry, and that all funds appropriated for such program should be spent in support of the goals of the program.

II. PURPOSE OF THE BILL

H.R. 2196, as reported, amends the Stevenson-Wydler Technology Innovation Act of 1980 (P.L. 96-480) and the Federal Technology Transfer Act of 1986 (P.L. 99-502), among other provisions. The bill seeks to provide the following objectives:

(1) To promote prompt deployment by United States industry of discoveries created in a collaborative agreement with federal laboratories by guaranteeing the industry partner sufficient intellectual property rights to the invention;

(2) To provide important incentives and rewards to federal laboratory personnel who create new inventions;

(3) To provide several clarifying and strengthening amendments to current technology transfer laws; and

(4) To make changes affecting the Fastener Quality Act (P.L. 101-592), the federal use of standards, and the management and administration of scientific research and standards measurement at the National Institute of Standards and Technology (NIST).

III. BACKGROUND AND NEED FOR THE LEGISLATION

Many of the United States economic advances of the new millennium are rooted in the research and development performed in our laboratories today. Our nation's future well-being, therefore, becomes dependent on the continuous transfer of basic science and technology from our laboratories in the United States, including our federal laboratories, to the private sector to create commercial goods and services. Successful technology transfer results in the creation of innovative products or processes becoming available to meet or induce market demand.

Congress has long tried to encourage transfer to the private sector of unclassified technology created in our federal laboratories. This is eminently logical since federal laboratories are considered one of our nation's greatest assets; yet, they are also a largely untapped resource of technical expertise. The United States has over 700 federal laboratories, employing one of six scientists in the nation and occupying one-fifth of the country's lab and equipment ca-

pabilities. It is, therefore, important to our future economic well-being to make the ideas and resources of our federal laboratory scientists available to United States companies for commercialization opportunities.

By permitting effective collaboration between our federal laboratories and private industry, new technologies and industrial innovation can be effectively commercialized and brought into the broader economy, thus enhancing our nation's ability to compete in the global marketplace. To help further this goal, Congress first enacted the Stevenson-Wydler Technology Innovation Act of 1980 (P.L. 96-480). The Stevenson-Wydler Act required federal laboratories to take an active role in technical cooperation and established technology transfer offices at all major federal laboratories. That landmark legislation expanded considerably with the Federal Technology Transfer Act of 1986 (P.L. 99-502) and the National Competitiveness Technology Transfer Act of 1989 (P.L. 101-189).

The Federal Technology Transfer Act of 1986 allowed a government-owned, government-operated (GOGO) laboratory staffed by federal employees to enter into a Cooperative Research and Development Agreement (CRADA) with industry, universities, and others. The CRADA mechanism allows a laboratory and an industrial company to negotiate patent rights and royalties before they conduct joint research, giving the company patent protection for any inventions and products that result from the collaboration. This patent protection provides an incentive for the companies to invest in turning laboratory ideas into commercial products. Furthermore, if a federal laboratory negotiates the payment of royalties as part of a CRADA arrangement, the Federal Technology Transfer Act of 1986 provides that part of those royalties are shared with the federal inventor as a reward for his or her work and as an incentive to them and others to report and assist in the transfer of potentially valuable inventions. A CRADA also provides a federal laboratory with valuable insights into the needs and priorities of industry, and with the expertise available only in industry, that enhances a laboratory's ability to accomplish its mission.

The National Competitiveness Technology Transfer Act of 1989, included as Section 3131 et seq. of the Department of Defense Authorization Act for Fiscal Year 1990 (P.L. 101-189), extended the CRADA authority to a government-owned, contractor-operated (GOCO) laboratory such as the ones at the Department of Energy. It also protected information and innovations, brought into and created through a CRADA, from disclosure for a limited period of time.

Since the inception in 1986 of the CRADA legislation, over 2,000 have been signed, resulting in the transfer of technology, knowledge, and expertise back and forth between our federal laboratories and the private sector. Under current law, the work done under a CRADA must not detract from the mission responsibilities of a federal laboratory. The federal laboratory may accept funds, personnel, services, and property from the private sector partner and may provide personnel, services, and property in return, but the labs are expressly prohibited from providing direct funding to their collaborating partners.

Despite the success of the CRADA legislation, there are existing impediments to private companies entering into CRADAs. The law was originally designed to provide a great deal of flexibility in the negotiation of intellectual property rights to both the private sector partner and the federal laboratory; however, it provides, little guidance to either party on the adequacy of those rights a private sector partner should receive in a CRADA.

Agencies are given broad discretion in the determination of intellectual property rights under CRADA legislation. This has often resulted in laborious negotiations of patent rights for certain laboratories and their partners each time they discuss a new CRADA. With options ranging from assigning the company full patent title to providing the company with only a nonexclusive license for a narrow field of use, both sides must undergo this negotiation on the range of intellectual property rights for each CRADA.

This uncertainty of intellectual property rights, coupled with the time and effort required in negotiation, may now be hindering collaboration by the private sector with federal laboratories. This, in essence, has become a barrier to technology transfer. Companies are reluctant to enter into CRADAs, or equally important, to commit substantial investments to commercialize CRADA inventions, unless they have some assurance they will control important intellectual property rights.

H.R. 2196, the National Technology Transfer and Advancement Act of 1995, seeks to enhance the possibility of commercialization of technology and industrial innovation in the United States by providing assurances that sufficient rights to intellectual property will be granted to the private sector partner with a federal laboratory. The Act guarantees to the private sector partner the option, at minimum, of selecting an exclusive license in a field of use for a new invention created jointly or solely by the government laboratory in a CRADA. The company would then have the right to use the new invention in exchange for reasonable compensation to the laboratory. The Act also assures the collaborator that it may take title to an invention it makes under the CRADA.

In addition, H.R. 2196 addresses concerns about government rights to an invention created in a CRADA. It provides that the federal government will retain minimum statutory rights to use the technology for its own purposes. It provides limited government "march-in-rights" if there is a public necessity that requires compulsory licensing of the technology. H.R. 2196 also provides enhanced financial incentives and rewards to federal laboratory scientists for new technology that results in marketable products, to be paid for from the income the laboratories receive for the commercialized technology.

IV. Legislative History

Congresswoman Constance A. Morella of Maryland introduced H.R. 2196 on August 4, 1995. The bill was originally cosponsored by Congressmen Robert S. Walker of Pennsylvania, George E. Brown, Jr. of California, and John S. Tanner of Tennessee. Senator John D. Rockefeller, IV of West Virginia introduced the Senate companion bill, S. 1164, on August 10, 1995.

On June 27, 1995, the House Science Committee's Technology and Basic Research Subcommittees held a joint hearing on technology transfer and our federal laboratories, with a focus on the draft text of H.R. 2196. The testimony from the June hearing supplemented the hearing record already established in the previous Congress on the bill text. On September 20, 1994, in the 103rd Congress, the House Science, Space, and Technology Committee's Technology, Environment, and Aviation Subcommittee held a hearing on H.R. 3590, the Technology Transfer Improvements Act of 1993, which led to further refinements in the bill.

On October 18, 1995, the Technology Subcommittee unanimously reported H.R. 2196 favorably to the full Committee, with an amendment in the nature of a substitute. The amendment incorporated certain provisions affecting the National Institute of Standards and Technology (NIST), among others, which were approved by the House Science Committee, on June 28, 1995, as part of H.R. 1870, the American Technology Advancement Act of 1995. The amendment provisions were passed by the House, on October 12, 1995, in Title VI of H.R. 2405, the Omnibus Civilian Science Authorization Act of 1995.

On October 25, 1995, the Science Committee considered H.R. 2196, as amended by the subcommittee. The Committee accepted certain additional amendments to the bill and ordered H.R. 2196 reported to the House without objection by voice vote.

V. Outline Summary of Major Provisions of the Bill

Statutory Authority:

- Amends the Stevenson-Wydler Technology Innovation Act of 1980 (P.L. 96-480) and the Federal Technology Transfer Act of 1986 (P.L. 99-502), among other provisions, by creating incentives and eliminating impediments to encourage technology commercialization, and for other purposes.
- Impacts upon technology transfer policies in both a government-owned, government-operated (GOGO) laboratory and a government-owned, contractor-operated (GOCO) laboratory.

Effect upon Technology Transfer in a CRADA:

- Provides assurances to United States companies that it will be granted sufficient intellectual property rights to justify prompt commercialization of inventions arising from a CRADA with a federal laboratory
- Provides important incentives and rewards to federal laboratory personnel who create new inventions

Effect upon CRADA Private Sector Partner under the Act:—

- Guarantees right to option, at minimum, of exclusive license in a field of use for inventions jointly or solely developed by a federal laboratory resulting from a CRADA
- Assures that privileged and confidential information will be protected when CRADA invention is used by the government
- Assures private sector partner the right to possess its own inventions developed in a CRADA

Effect upon Federal Government under the Act:

- Provides right to use invention for legitimate government needs

- Clarifies contributions laboratories can make in a CRADA and continues current prohibition of direct federal funds to a private sector partner in a CRADA
- Clarifies that agencies may use royalty revenue to hire temporary personnel to assist in the CRADA or in related projects
- Permits agencies to use royalty revenue for related research in the laboratory, and for related administrative and legal costs
- Allows federal government to require licensing of its own inventions to others only for compelling public health, safety, or regulatory needs
- Returns all unused royalty revenue to the Treasury after the completion of the second fiscal year
- Clarifies authority of laboratories, agencies, or departments to transfer excess scientific equipment by gift, loan, or lease to public and private schools and nonprofit institutions

Effect upon Federal Scientist/Inventor under the Act:

- Provides the inventor with the first $2,000, and thereafter, at least 15% of the royalties, in each year, accrued for inventions made by the inventor
- Increases individual maximum royalty award to $150,000 per year
- Allows rewards for other lab personnel who substantially assist in the invention
- Restates current law permitting a federal employee to work on the commercialization of his or her invention
- Clarifies that a federal inventor can obtain or retain title to his or her invention in the event the government chooses not to pursue it

Administrative and Management Provisions Affecting the National Institute of Standards and Technology (NIST):

- Provides authority for a shuttle bus service between the NIST Gaithersburg, Maryland campus and the Shady Grove Metro subway station for employees to use in their commute to work
- Expands the NIST Visiting Committee to 15 members, with the requirement that 10 members shall be from United States industry
- Increases the cap on postdoctoral fellowships to 60 positions from 40 positions
- Makes permanent the NIST Personnel Demonstration Project

Fastener Quality Act Amendments:

- Amends the Fastener Quality Act (P.L. 101-592), as recommended by the Fastener Advisory Committee, focusing on heat mill certification, mixing of like-certified fasteners, and sale of fasteners with minor nonconformances

Federal Use of Standards:

- Restates and clarifies existing authority for the National Institute of Standards and Technology (NIST) to coordinate standards and conformity assessment activities in all levels of government
- Codifies Office of Management and Budget (OMB) Circular A-119, requiring federal agencies to adopt and use standards developed by voluntary consensus standards bodies and to work

closely with those organizations to ensure that the developed standards are consistent with agency needs

VI. SECTION-BY-SECTION ANALYSIS

SECTION 1. SHORT TITLE.

The Act may be cited as the "National Technology Transfer and Advancement Act of 1995."

SECTION 2. FINDINGS.

Bringing technology and industrial innovation to the marketplace is central to the economic, environmental, and social well-being of the country. The federal government can help United States businesses speed the development of new products and processes by entering into a Cooperative Research and Development Agreement (CRADA) with private sector businesses. A CRADA arrangement makes available the assistance of federal laboratories to the private sector. However, the successful commercialization of technology and industrial innovation is predominantly dependent on actions taken by the private sector. This commercialization will be enhanced if companies, in return for reasonable compensation to the federal government, can more easily obtain exclusive licenses to inventions made jointly or solely by a federal laboratory which develop as a result of this cooperative research with federal laboratory scientists. Private sector partners are also assured that they will own inventions they develop in a CRADA.

SECTION 3. USE OF FEDERAL TECHNOLOGY.

Amends the Stevenson-Wydler Technology Innovation Act of 1980 to continue participation in the Federal Laboratory Consortium for Technology Transfer by all federal agencies with major federal laboratories.

SECTION 4. TITLE TO INTELLECTUAL PROPERTY ARISING FROM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

Guarantees an industrial partner to a joint Cooperative Research and Development Agreement (CRADA) the option to choose, at minimum, an exclusive license for a field of use to the resulting invention. Reiterates government's right to use the invention for its legitimate needs, but stresses the obligation to protect from public disclosure any information classified as privileged or confidential under Exemption 4 of the Freedom of Information Act (FOIA).

Provides that, when the laboratory assigns ownership or an exclusive license to the industry partner, licensing to others may be required if needed to satisfy compelling public health, safety or regulatory concerns. Clarifies current law defining the contributions laboratories can make in the CRADA. Clarifies that agencies may use royalties to hire temporary personnel to assist in the CRADA or related projects. Enumerates how a government-owned, government-operated (GOGO) laboratory and a government-owned, contractor-operated (GOCO) laboratory may use resulting royalties. Guarantees industrial partner the right to take title to its inven-

tion under a CRADA in exchange for granting the government a license for research or governmental purpose.

SECTION 5. DISTRIBUTION OF INCOME FROM INTELLECTUAL PROPERTY RECEIVED BY FEDERAL LABORATORIES.

Requires that agencies must pay federal inventors each year the first $2,000 and thereafter at least 15% of the royalties received by the agency for the inventions made by the employee. Increases an inventor's maximum royalty award to $150,000 per year. Allows for rewarding other laboratory personnel involved in the project, permits agencies to pay for related administrative and legal costs, and provides a significant new incentive by allowing the laboratory to use royalties for related research in the laboratory. Provides for federal laboratories to return all unobligated and unexpended royalty revenue to the Treasury after the end of the second fiscal year after the year which the royalties were earned.

SECTION 6. EMPLOYEE ACTIVITIES.

Clarifies the original congressional intent that rights to inventions should be offered to employees when the agency is not pursuing them. Permits a federal scientist, or a former laboratory employee, in the event that the federal government chooses not to pursue the right of ownership to his or her invention or otherwise promote its commercialization, to obtain or retain title to the invention for the purposes of commercialization.

SECTION 7. AMENDMENT TO BAYH-DOLE ACT.

Reflects technical changes made by this Act as it affects the Bayh-Dole Act (P.L. 96-517).

SECTION 8. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT AMENDMENTS.

Provides authority for the National Institute of Standards and Technology (NIST) to have a shuttle bus service between its Gaithersburg, Maryland campus and the Shady Grove Metro subway station for employees to use in their commute to work. Expands the NIST Visiting Committee from 9 members to 15, with the requirement that 10 members, increased from 5, shall be from United States industry. Increases the cap of postdoctoral fellowships from a maximum of 40 to 60 positions per fiscal year.

SECTION 9. RESEARCH EQUIPMENT.

Clarifies that a laboratory, agency, or department can give, loan, or lease excess scientific equipment to public and private schools and nonprofit institutions, without regard to federal property disposal laws.

SECTION 10. PERSONNEL.

Makes permanent the National Institute of Standards and Technology (NIST) Personnel Demonstration Project. The project has helped NIST recruit and retain the "best and the brightest" sci-

entists to meet its scientific research and measurement standards mission.

SECTION 11. FASTENER QUALITY ACT AMENDMENTS.

Amends the Fastener Quality Act (P.L. 101-592), as recommended by the Fastener Advisory Committee, focusing on mill heat certification, mixing of like-certified fasteners, and sale of fasteners with minor non-conformances. The Fastener Advisory Committee reported that, without these recommended changes, the cumulative burden of compliance costs would be close to $1 billion on the fastener industry.

SECTION 12. STANDARDS CONFORMITY.

Restates existing authorities for National Institute of Standards and Technology (NIST) activities in standards and conformity assessment. Requires NIST to coordinate among federal agencies, survey existing state and federal practices, and report back to Congress on recommendations for improvements in these activities. Codifies OMB Circular A-119 requiring federal agencies to adopt and use standards developed by voluntary consensus standards bodies and to work closely with those organizations to ensure that the developed standards are consistent with agency needs.

SECTION 13. SENSE OF CONGRESS.

Provides that it is the sense of Congress that the Malcolm Baldrige National Quality Award program offers substantial benefits to United States industry, and that all funds appropriated for the program should be spent in support of its goals.

VII. COMMITTEE VIEWS

SECTION 1. SHORT TITLE.

H.R. 2196 was originally introduced as the "Technology Transfer Improvements Act of 1995." The title of the bill was changed to the "National Technology Transfer and Advancement Act of 1995" to reflect the addition of certain provisions in H.R. 1870, the American Technology Advancement Act of 1995, among others. The added provisions passed the House in Title VI of H.R. 2405, the Omnibus Civilian Science Authorization Act of 1995.

SECTION 2. FINDINGS.

The Committee understands that promoting technology and bringing industrial innovation to the marketplace is vital to our nation's future. To further this objective and to help speed the development of new technologies, the Committee has long promoted the concept of Cooperative Research and Development Agreements (CRADA) between federal laboratories and United States industry.

The Committee, however, believes commercialization of technology and its corollary impact upon our nation's ability to compete in the global marketplace ultimately depends on actions by industry. United States industry, therefore, must be provided assurances that they will be granted sufficient rights—such as an exclusive li-

cense for a field of use—to justify prompt commercialization of resulting inventions arising from a CRADA.

SECTION 3. USE OF FEDERAL TECHNOLOGY.

The Committee supports continued participation in the Federal Laboratory Consortium for Technology Transfer (FLC) to develop and facilitate further technology transfer from our federal laboratories.

SECTION 4. TITLE TO INTELLECTUAL PROPERTY ARISING FROM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

The section provides clear guidelines that simplify the negotiation of a Cooperative Research and Development Agreement (CRADA)—addressing a major concern of private sector companies—and, in the process, gives companies greater assurance they will share in the benefits of the research they fund. The Committee believes the Act will result in a reduction of negotiation time and effort required to implement a CRADA and an alleviation of the uncertainty that can deter companies from working with the government. This will lead to quicker transfer and commercialization of laboratory technology.

Each private sector partner entering into a CRADA with a federal laboratory has the ability to require that the CRADA provides exclusive intellectual property rights for a pre-negotiated field of use for any invention occurring under the agreement, regardless of whether the invention is made by a laboratory employee, a company employee, or a combination thereof. Thus, the industrial partner receives, at minimum, the option of an exclusive license in a field of use selected by the company. The important factor is that industry selects which option makes the most sense under the CRADA.

A company will now have the knowledge that they are assured of having no less than an exclusive license in an application area of its choosing. The Committee believes these statutory guidelines give companies real assurance that they will receive important intellectual property out of any CRADA they fund. Knowing they have an exclusive claim to the invention will, consequently, give a company both an extra incentive to enter into a CRADA and the knowledge that they can safely invest further in the commercialization of that invention.

Although a collaborating party is given a statutory option to choose an exclusive license for a field of use, agencies may still assign full patent title to the company. Agencies consulted by the Committee felt they needed to retain that flexibility for inventions made by government employees and the Act allows them to do so.

The Committee fully expects that the private sector partner enters into a CRADA in order to advance a specific research agenda and that the company intends to aggressively pursue, whenever appropriate, full commercial opportunities for any new discoveries resulting from the CRADA. Should a prviate sector partner, for their own reasons, choose not to commercialize a resulting invention while another company is interested in pursuing its commercial op-

portunities, the Committee expects that the CRADA partner would license the invention rights to the other company.

It is generally contemplated that companies and agencies will work together to convert that company's specific research agenda into a document stating a particular field of use, for which the company is entitled to exclusive intellectual property rights. If more than one company is involved, the Committee expects each of their research interests be taken into consideration in defining the field of use, and that in no event will the total rights given to the private sector participants under a CRADA be less than they would be if just one company was participating in the CRADA.

In return for the intellectual property rights, the government may negotiate for royalties as reasonable compensation. The government is always entitled to a non-exclusive, nontransferable, paid-up license to use the invention for its own purposes, since it should not be expected both to pay for the research and then to pay for the use of that research.

In addition, the government retains minimal rights to require licensing to another company under unusual but important circumstances, such as when the invention is needed to meet health and safety needs not reasonably satisfied by the collaborating party or if the collaborating partner fails to comply with the agreement requirements, which the Committee believes includes the failure of the private sector partner to pursue the invention's commercial opportunities. In compelling circumstances of public necessity, the government can invoke these limited "march-in" rights. The language parallels similar provisions in the Bayh-Dole Act covering universities and non-profit organizations. These rights assure the public that their interests in the new technologies are being considered. Also, it should be noted that for purposes of this section, any party holding property rights, in inventions arising under this section originally assigned to a non-governmental, non-laboratory party to the CRADA shall be considered collaborating parties.

The government may have rights to use the invention, for its legitimate needs, but must protect from public disclosure any information classified as privileged or confidential under Exemption 4 of the Freedom of Information Act. CRADA participants are given the same Freedom of Information Act (FOIA) protection they would have as government contractors. The Committee believes this is not an unreasonable burden on the government and is an important safeguard to industry that its investment in the CRADA will be protected.

The section modifies current law to make sure that personnel hired with funds received from the private sector partner in a CRADA shall not be subject to full time equivalent personnel ceilings and restrictions. It clarifies that agencies may use royalties to hire temporary personnel to assist in the CRADA or related projects. Currently, many agencies face a cap on bringing in additional personnel because of federal downsizing. The current language will not affect downsizing, but allows those laboratories with sufficient royalty funds, to bring in needed temporary staff to make partnerships under the Act successful. This is accomplished without requiring additional federal funds.

The Committee is sensitive to the differences between a government-owned, government-operated (GOGO) laboratory and a government-owned, contractor-operated (GOCO) laboratory, and has worked to make sure that private sector partners can receive the same benefits from entering a CRADA with either type of laboratory. The Committee expects the statute to treat both types of laboratories similarly. To this end, it expects agencies to modify their prime contracts with contractor-operated laboratories within 90 days of enactment of this legislation to reflect the intent of this Act.

These modifications are to include delegating to the laboratory director the authority to negotiate intellectual property provisions for the government, including the right to waive rights of ownership in an invention made by a collaborating party, giving GOCO employees authority to commercialize inventions under the same conditions as employees of other government laboratories, and allowing a GOCO to keep royalty income for distribution. The section allows the managers of a GOCO to use royalty streams to make payments to inventors, for the various uses available to a GOGO, or for scientific research and development consistent with laboratory missions and objectives. The Act does not change the current prohibition on providing federal funds to a private sector partner in a CRADA.

It is also the Committee's intent under this Act, as it is in the public laws this Act amends, that an agency should determine which of its management levels should be considered a laboratory for purposes of this Act. It is not the intent of the Committee to count as laboratories under this Act, individual research laboratories which are part of a larger management structure which is also a laboratory. However, the Committee approves of decisions of agencies, such as the Department of Defense and the National Institutes of Health, to treat certain research institutes, centers, and divisions as separate laboratories even if they are co-located with other institutes, centers, or divisions.

The Committee believes the clear intellectual property guidelines enumerated in this section will simplify the negotiation of a CRADA and, in the process, give companies greater assurance they will share in the benefits of the research they fund. The Committee expects that this change will increase the number of collaborative efforts between government and industry, reduce the time and effort required to negotiate such agreements, and thus speed the transfer of laboratory technology and know-how to the American public and the broader economy.

SECTION 5. DISTRIBUTION OF INCOME FROM INTELLECTUAL PROPERTY RECEIVED BY FEDERAL LABORATORIES.

When royalties or other payments are received from the licensing and assignment of inventions under a CRADA, the section requires that agencies must pay the federal inventor each year the first $2,000 and thereafter at least 15% of the royalties. In addition, it raises the maximum royalty award per year to $150,000 to any one person. The section responds to criticism made before the Committee that agencies are not sufficiently rewarding laboratory personnel for their inventions.

Royalty sharing was established by the Federal Technology Transfer Act of 1986 and was intended to provide an incentive for scientists and government-employee inventors at federal laboratories to report, develop, and help license inventions with commercial potential. The General Accounting Office, in its December 1992 report to Congress entitled "Technology Transfer: Barriers Limit Royalty Sharing's Effectiveness" (GAO/RCED-93-6) outlined the scope of the existing limitations. The Committee addressed in this section certain royalty sharing recommendations made by GAO, affecting distribution of income from intellectual property received in a CRADA.

Currently, the law states only that the federal inventor should receive a minimum of 15% of the royalties, with a maximum annual award of $100,000. Since few CRADA inventions, in practice, generate large annual royalties, only a few inventors under current law, consequently, would receive a substantial bonus. The Committee believes that providing inventors with the first $2,000 earned each year from an invention, and then 15% of the remainder, is a better reward and incentive.

The section also provides for the distribution of the balance of royalties or other payments received by a laboratory. A laboratory may reward personnel, other than the inventor, who substantially contribute to the invention. A laboratory may pay for related administrative and legal costs, such as education, training, intellectual property management, and licensing services. In addition, the Act provides a significant new incentive by allowing the laboratory to use royalties for related scientific research and development, consistent with the objectives and mission of the laboratory. A laboratory may have until the end of the second fiscal year, succeeding the fiscal year in which the royalties and other payments were received, to obligate and expend the funds before all unused monies are returned to the federal treasury. In these times of limited federal fiscal resources, the Committee supports these important incentives and administrative provisions in this section.

SECTION 6. EMPLOYEE ACTIVITIES.

The section clarifies the original Congressional intent that rights to inventions should be given to employees or former employees, in certain instances, when the agency does not intend to file for a patent or maintain an existing patent. The Committee believes this language will correct any confusion that has arisen in some agencies regarding whether the government can subsequently waive ownership to inventions it does not intend to pursue. In the event the federal government chooses not to pursue the invention, a federal scientist may obtain or retain title to his or her invention for the purposes of commercialization.

SECTION 7. AMENDMENT TO BAYH-DOLE ACT.

The section restates the current law that the provisions of the Stevenson-Wydler Technology Innovation Act of 1980, as amended, shall take precedence over the provisions of the Bayh-Dole Act (P.L. 96-517) to the extent that they permit or require disposition of rights in subject inventions which are inconsistent with the Act.

SECTION 8. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT AMENDMENTS.

Authority for Metro Shuttle

Currently, the National Institute of Standards and Technology (NIST) provides a limited shuttle service between its Gaithersburg, Maryland campus and the Shady Grove Metro subway station for use only by visitors, official guests, and employees traveling on official business to Washington D. C. This requested authority would allow all NIST employees to use the shuttle to get to, and from, the Shady Grove station for their daily commute between work and home.

The Committee supports NIST's request for this authority. Providing authority for a Metro shuttle would not require any additional funding and would provide cost savings for the federal government since NIST would use the shuttle in lieu of individual employee transit subsidies.

Agencies are currently authorized to provide cash subsidies to employees to encourage them to use mass transit. This subsidy costs approximately $65 per employee per month. NIST does not currently provide these subsidies and will not provide them if given this requested authority. NIST proposes to encourage the use of mass transit by allowing employees to use the existing shuttle service.

The Committee understands that most NIST employees do not currently take advantage of mass transit since NIST is several miles from the Shady Grove Metro station and because the available commercial bus transportation route from Shady Grove to NIST is circuitous and extremely time consuming. The Committee further understands, however, that NIST employees have indicated they would be willing to take mass transit if convenient direct bus transportation from the Metro station were made available.

In addition, the Committee is aware that the National Capital Planning Commission and the Maryland National Park and Planning Commission are also strongly urging NIST to develop a Transportation Management Plan which would encourage the use of mass transportation, as well as a plan to encourage car pooling and bicycling.

Expansion of the Visiting Committee Membership

The Committee supports NIST's request to expand its Visiting Committee on Advanced Technology (VCAT) from nine members to fifteen members. This expansion will ensure the VCAT's expertise can match the breadth and diversity of NIST programs. Assessments of NIST laboratory programs require a panel with broad technical expertise since the labs have eight major operating units specializing in different fields of science and technology, which focus on different industry sectors.

In addition to this expertise, an ideal panel would include a diverse membership representing industry and government laboratories. At its present size of nine members, the Committee understands that the VCAT is challenged to provide the broad oversight and advice needed to best inform NIST's programs.

Post-Doctoral Fellows Program

The Postdoctoral Fellowship Program provides NIST with an opportunity to keep abreast of the latest developments in academic research. Additionally, the program provides a continuing infusion of the nation's outstanding scientists, mathematicians, and engineers into the NIST staff, both on a temporary basis and by selective recruiting for career appointments.

For recent doctoral graduates, the program provides an opportunity for concentrated research in association with NIST staff, often as a climax to formal career preparation. In return, NIST laboratories receive a stimulus to their industry-oriented programs from the presence of bright, highly motivated, recent doctoral graduates with records of research productivity. New ideas, techniques, and approaches to problems contribute to the overall research climate of the laboratories.

The number of postdoctoral fellowships at NIST was last increased in the National Bureau of Standards Authorization Act of 1987 (P.L. 99-574). An increase in the program to 60 possible positions, from its current cap of 40 fellowships, would permit NIST to enhance some of its programs. The NIST Postdoctoral Fellowships Program provides two-year fellowship appointments for outstanding scientists and engineers chosen through a national competition administered by the National Research Council and the National Academy of Sciences. Fellows are not to be included in agency personnel ceilings.

SECTION 9. RESEARCH EQUIPMENT.

The Committee intends to clarify a laboratory, agency, or department's authority to give, loan, or lease excess scientific equipment to public and private schools and nonprofit institutions, without regard to federal property disposal laws. The section clarifies the American Technology Preeminence Act of 1991 (P.L. 102-245) that allowed federal laboratories to donate their excess scientific equipment directly to these institutions, but which was interpreted by some agencies as being subject to federal property disposal laws, thereby negating its impact.

The original intention was to eliminate much of the paperwork burden which seems to hinder federal laboratories from donating such equipment. The cumbersome paperwork requirements also discouraged the public and private schools from attempting to obtain excess equipment. The section makes clear the intent of the original amendment as an alternative, free-standing method of distribution of surplus laboratory property. The Committee believes this should eliminate further problems with its implementation.

SECTION 10. PERSONNEL.

The Committee recognizes the success of the National Institute of Standards and Technology (NIST) Personnel Demonstration Project and its dramatic effect on personnel management and administration.

The NIST Authorization Act for Fiscal Year 1987 (P.L. 99-574), which originated in this Committee, established the NIST Personnel Demonstration Project to create an innovative new personnel management system with hiring, classification, compensation, and

performance methods more like those of the private sector. The legislation required NIST to work with OPM under the provisions of 5 U.S.C. 4703, which authorized demonstration projects for a duration of five years, but provided OPM authority to extend a project.

The success of the five-year pilot effort led OPM to extend the NIST Personnel Demonstration Project beyond its original five year period to September 30, 1995. The pilot project is once again up for renewal, but the Committee feels that the concept is now proven and that there is nothing further to be gained by treating it as an experiment. Therefore, this section makes permanent the current NIST personnel system.

Feedback from managers and employees, as well as evaluation reports from OPM contractors, showed the project had met its objectives to recruit and retain quality staff, make compensation more competitive, link pay to performance, simplify position classification, streamline processing, improve the staffing process, get new hires aboard faster, and increase the manager's role and accountability in personnel management. As a result, NIST is now competing more effectively in the labor market. New hires have been made under the system that could not have been made previously because NIST could not make or match offers for highly-recruited scientists in a timely manner. This pay-for-performance system has also improved NIST's ability to keep its best personnel.

SECTION 11. FASTENER QUALITY ACT AMENDMENTS.

The Committee has adopted recommendations made by the Fastener Advisory Committee, amending the Fastener Quality Act (P.L. 101-592). The Fastener Advisory Committee, created by Congress, determined that the Fastener Quality Act will have an unintended, detrimental impact on business. The Fastener Advisory Committee reported that without these recommended changes, the cumulative burden of costs on the fastener industry could be close to $1 billion for absolute compliance to the Fastener Quality Act.

In the 101st Congress, the writers of the original Fastener Quality Act set out to answer real threats that counterfeit and substandard fasteners posed to our defense readiness and our public safety. At the time, the perception in the media was that counterfeit and substandard fasteners were mainly imported from overseas. In reality, there were many cases where these counterfeit and substandard fasteners were manufactured domestically.

Counterfeit and substandard fasteners in most cases are two different problems. Counterfeit fasteners penetrated the industry by not having correct, and in some cases, no manufacturer's identification marks and specification marks. These marks are necessary to indicate grade of material and to trace the manufacturer of the product. Substandard fasteners are products that fail in application either through improper manufacturing or misapplication of a product by the function of the fastener in its intended use. To address both of these problems, fasteners covered by this Act are required to be tested, inspected, and certified by accredited laboratories prior to distribution into market.

The Fastener Quality Act requires registration of manufacturer's headmarks with the Patent and Trademark Office. In addition, conformance letters, which tie the products to its manufacturing

specifications, are mandatory on all material manufactured by foreign sources. Domestic manufacturers are required to keep the certification of performance and a copy of the test report on file.

The Committee has adopted recommendations in this section for amending the Fastener Quality Act that were submitted in March 1992 and again in February 1995 to Congress by the Fastener Advisory Committee. Such recommendations were the result of nine public meetings by the Fastener Advisory Committee involving more than 2,000 pages of transcript documenting the need for the amendments. Subsequent to the recommendations to Congress, the National Institute of Standards and Technology (NIST) published proposed implementing regulations for public comment in August 1992. More than 300 letters were received from the public. Over 70% of the letters supported the recommendations of the Fastener Advisory Committee for amending the Act.

The Committee has listened to the Fastener Advisory Committee, its Fastener Public Law Task Force, and other representatives from the manufacturing, importing, and distribution sectors of the United States fastener industry. The task force represents 85 percent of all United States companies and their suppliers involved in the manufacture, distribution, and importation of fasteners and over 100,000 employees in all 50 states. The Committee, along with NIST, has worked to improve the law, while preserving safety and quality.

The section focuses mainly on mill heat certification, mixing of like-certified fasteners, and sale of fasteners, in most cases, with minor non-conformances. The Committee believes that the section maintains safety, reduces the unnecessary burdens on industry, and ensures proper enforcement of the Fastener Quality Act.

In addition, the Committee understands concerns voiced by the fastener industry regarding the methods in which fasteners may be altered under the Fastener Quality Act. As originally passed, the Fastener Quality Act states that fasteners may be altered in three ways: by through hardening; by electroplating fasteners having tensile strengths of 150,000 psi or higher; or by machining. Further in the Fastener Quality Act, it is stated that if such an alteration changes the performance of the fastener so it no longer conforms to the original standards and manufacturer's certification. It is considered a significant alteration, and the person who sells such fasteners shall be treated as the manufacturer, causing the altered fastener to be inspected and tested. The Committee expects these concerns can be adequately addressed by removing the specific statutory threshold value of altered fasteners from this Act. This will permit NIST to establish a threshold value in its implementing regulations, based on extensive technical review, following NIST's consideration of public comment by members of the fastener industry and other interested parties.

SECTION 12. STANDARDS CONFORMITY.

The Committee understands the crucial role standards play in all facets of daily life and in the ability of the nation to compete in the global marketplace. The United States, unlike the federalized standards system of most other countries, relies heavily on a decentralized, private sector-based, voluntary consensus standards sys-

tem. Past federal government efforts have concentrated primarily in metrology research, maintenance of national measurement standards, including calibration services and standard reference materials, participation in voluntary standards activities, government-to-government negotiations, and development of standards for governmental purposes. This unique consensus-based voluntary system has served us well for over a century and has contributed significantly to United States competitiveness, health, public welfare, and safety.

Playing an important role in maintaining a future competitiveness edge is the ability to develop standards which match the speed of the rapidly changing technology of the marketplace. While the Committee is aware that the standards role of the federal government is different from that of our trading partners, federal agencies are, nevertheless, major participants in the United States standards system.

The key challenge is to update domestic standards activities, in light of increased internationalization of commerce, and to reduce duplication and waste by effectively integrating the federal government and private sector resources in the voluntary consensus standards system, while protecting its industry-driven nature and the public good. Better coordination of federal standards activities is clearly crucial to this effort.

These issues were raised by the National Research Council (NRC) in its March, 1995 report entitled, "Standards, Conformity Assessment, and Trade in the 21st Century." The NRC report recommended that Congress amend NIST's organic act (15 U.S.C. 271, et seq.) to clarify NIST's lead role in the implementation of a government-wide policy of phasing out the use of federally-developed standards wherever possible, in favor of standards developed by private sector, consensus standards organizations, with input from affected agencies. This policy is already eliminating duplication of effort and conflict between government standards and specifications, and widely-accepted industry practices in the same technical areas. The Committee, after conducting a June 29, 1995 hearing on the issue, adopted the NRC recommendation in this section, making it clear NIST has lead agency responsibility for standards and conformity assessment activities that are interagency in nature.

The section requires NIST to develop a strategic plan to evaluate state and local criteria for accrediting testing laboratories and product certifiers, and to take the lead in efforts to build a network of mutual recognition agreements regarding conformity assessment among federal, state, and local authorities, in the interest of eliminating unnecessary duplication and burden on industry. The collective impact of these changes is to grant NIST a clear statutory mandate to act as the lead agency for ensuring federal use of standards developed by private consensus standards organizations to meet regulatory and procurement needs, and to guide the states toward a national, rationalized system of conformity assessment and certification.

NIST is required to report to Congress on its progress and the feasibility of such actions by January 1, 1996.

In addition, the section codifies the present requirements of Office of Management and Budget (OMB) Circular A-119 and re-

quires agencies, through OMB, to report annually to Congress on the reasons for deviating from voluntary consensus standards when the head of the agency deems that prospective consensus standards are not appropriate to the agency needs. OMB Circular A-119 was originally promulgated in 1982 and revised in 1993. It requires federal agencies to adopt and use standards, developed by voluntary consensus standards bodies, and to work closely with these organizations to ensure that developed standards are consistent with agency needs. Adherence to OMB Circular A-119 is a matter of great concern to industry and the Committee since the federal record with regard to the use of voluntary consensus standards is mixed, at best.

It is not the Committee's intent to create a bureaucratic reporting requirement, or to slow down standards procurement activities within agencies. It is, however, the intent of the Committee to make private sector-developed consensus standards the rule, rather than the exception. Voluntary, private sector, consensus standards can be developed by standards bodies which include active government participation with industry. In the exceptional situation where federally-developed standards are deemed necessary, the Committee requires the agencies to report any standards development activities to OMB, via NIST.

The Committee does recognize the hard work and extensive conversion now actively underway in certain agencies, such as the Department of Defense, to implement OMB Circular A-119 and understands that this codification of the Circular complements rather than supplants these activities. The Committee understands that these agencies have already implemented procedures for high-level internal review of decisions to write federal standards. The Committee believes codifying OMB Circular A-119, however, should not result in significant changes, if any, in these standards development procedures.

An agency report to OMB required under this section is to be clear and informative, but may be summary in nature. The Committee is not requiring agencies to fully catalog every standards exception in their reporting, but does require that those records be accessible to Congress.

The section will have the effect of assisting agencies in focusing their attention on the need to work with these voluntary consensus standards bodies, whenever and wherever appropriate. It will also assist Congress in monitoring federal agency efforts to implement the OMB Circular A-119. Additionally, the section is consistent with recommendations made to the Committee as part of the NRC testimony regarding its March, 1995 report.

SECTION 13. SENSE OF CONGRESS.

The Committee supports the goals of the Malcolm Baldrige National Quality Award program. With the United States facing increased competition in the global marketplace, the development of effective quality methods have helped the nation's industries to maintain their market share. These quality methods have led to greater process control, more efficient quality cost measurements and controls, better quality management, and fewer manufacturing defects.

One such method of generating awareness and interest in total quality principles and encouraging United States businesses to produce globally competitive quality products and services is the Malcolm Baldrige National Quality Award. The Award was established under the Malcolm Baldrige National Quality Improvement Act of 1987 (P.L. 100-107) and was named after the late Secretary of Commerce.

As a result of adherence to the Baldrige Award principles, participating companies have created frameworks by which to measure their business success, set clear directions, and share accountability. Past award recipients have used the Award's major tenets and selection criteria to develop a commitment to quality and increased competitiveness. The Baldrige Award is managed by the National Institute of Standards and Technology (NIST).

VIII. Summary of Hearings

a. 103rd Congress
The Technology Transfer Improvements Act of 1993

On September 20, 1993, the House Science, Space, and Technology Committee's Subcommittee on Technology, Environment, and Aviation held a hearing on H.R. 3590, the Technology Transfer Improvements Act of 1993, the legislation upon which H.R. 2196 is based. The bill, which had been revised since its original introduction, received strong support from the Administration and a series of federal agency officials, as well as a broad spectrum of industry association representatives.

The following witnesses testified before the subcommittee: The Honorable Mary L. Good, Under Secretary for Technology, Department of Commerce; Agnes Dover, Deputy General Counsel for Technology Transfer and Procurement, presenting testimony for the Honorable Charles B. Curtis, Under Secretary of the Department of Energy; David M. Ostfeld, Vice President, Career Activities Council, Institute of Electrical and Electronics Engineers (IEEE); Dr. William Martin, Vice President, Technology Transfer, Martin Marietta Energy Systems, Oak Ridge, Tennessee; Margaret McNamara, Vice Chairman, Federal Laboratory Consortium (FLC); Dr. Roger Werne, Member of the Council on Governmental Relations (COGR) and Associate Director of Engineering and Technology Transfer, Lawrence Livermore National Laboratory, Livermore, California; and Joseph P. Allen, Director, Training and Economic Development, National Technology Transfer Center, Wheeling, West Virginia.

Panel 1: Dr. Mary Lowe Good, Undersecretary of Commerce for Technology, testified to the Administration's support for the bill. She stated that the management of intellectual property arising from federally-supported research and development is essential to the successful promotion of early commercialization of new technology. She also noted that a CRADA remains an important avenue for government-industry-academic interaction and said that under the Clinton Administration the focus is moving away from "technology transfer" and mission spin-off toward development of technologies with commercial potential. She stated that in the situation of jointly developed technology arising under a CRADA, the

Administration supports ensuring the collaborating party the right to an exclusive license for the government's right of ownership in the invention. She also said that such an approach means that the private sector is able to effectively use the technology and, that in consideration for the government's contribution under the CRADA, the government retains certain rights and can ensure that the technology can be used appropriately in other industrial settings.

Agnes Dover, Deputy General Counsel for Technology Transfer and Procurement of the Department of Energy (DOE), testified to DOE's support of the bill. She noted that the average CRADA approval process time has been reduced by 50%, and the percentage of small business participation in a CRADA has increased from 25% to 35% in 1993. She said that DOE believes it is important that the exclusive license be for a defined field of use. She stated that utilization of a defined field of use would enhance other commercialization opportunities by enabling the laboratories to commercialize inventions arising under a CRADA in a field of use for which the collaborating party has no interest, while providing to the collaborating party necessary rights in the invention.

Panel 2: David M. Ostfeld, Vice-President for the Institute of Electrical and Electronics Engineers, testified that commercialization of technology and industrial innovation by business is enhanced by ownership of any invention or intellectual property developed in a CRADA and offered his support for the bill. Mr. Ostfeld stated that the incentives provided by the bill will encourage the commercialization of technology and will enhance United States competitiveness, as well as provide rewards to federal laboratory inventors.

Dr. William Martin, Vice President of Technology Transfer for Martin Marietta Energy Systems, testified that significant improvements can be made to enhance the interaction between the federal laboratories and industry by: (1) improving the awareness of industry with regard to federal laboratory capabilities; (2) striving to increase industry input for market-driven projects when appropriate to the funding agency's mission; and (3) reducing the barriers that inhibit the process of collaboration. He stated that Martin Marietta has implemented a number of process improvements that are beginning to streamline procedures and reduce the cycle time associated with processing a CRADA. He also noted other barriers to the CRADA process include the time required for discussion, refinement, and development of the technical aspects of the work to be performed in a CRADA. Mr. Martin indicated his support for the bill.

Ms. Margaret McNamara, Vice Chairman for the Federal Laboratory Consortium, testified that exclusive licenses for fields of use are becoming the ″best practice″ evolving among government laboratories because they promote the widest possible commercialization of technology by protecting the commercial positions of private companies while also preventing unproductive monopolization of rights to technology. She stated that assigning all intellectual property developed jointly by laboratory and private sector employees under a CRADA to the private sector partner could substantially reduce the commercial exploitation of the technology. Ms. McNamara stated that the bill would help promote CRADA development.

Dr. Roger Werne of the Lawrence Livermore National Laboratory testified that licensing laboratory technologies to companies in appropriate fields of use becomes essential to success. He stated that when intellectual property is jointly developed in a CRADA and is exclusively licensed to the company, the laboratory retains the right to use that intellectual property for government purposes. He also stated that this retention is important since many technologies are dual-use and may be needed for future national security needs. Dr. Werne noted that exclusivity in licensing requires the ability to protect proprietary information for the duration of the licenses and all legislation should protect the right of the company-laboratory partnerships to protect that information. He said that a failure to do so may render the exclusivity useless. Dr. Werne indicated his support for the bill.

Joseph P. Allen, Director of the National Technology Transfer Center, stated the belief by some companies that concluding agreements under the law takes too long and that agencies are not applying the same standards of exclusivity for intellectual property rights. Mr. Allen stated his reluctance to see a legislative formula mandating that agencies can not spend more than 15% of their royalties for administrative and licensing costs, noting that these expenses are a real barrier to effective technology transfer. He stated that the bill would serve to enhance technology transfer.

b. 104th Congress

Federal Technology Transfer Policies and our Federal Laboratories: Methods for Improving Incentives for Technology Transfer at Federal Laboratories

On June 27, 1995, the Subcommittee on Technology and the Subcommittee on Basic Research held a joint hearing to receive testimony regarding the transfer of technology from federal laboratories, with a focus on the draft text of H.R. 2196.

Witnesses from federal laboratories and from industry provided commentary on a circulated draft of H.R. 2196. The hearing supplemented the record on the bill already established in the previous Congress. Witnesses expressed support for the text, as an effective mechanism for stimulating greater commercialization of the research being performed by the federal laboratories.

Presenting testimony at the hearing were: Joseph P. Allen, Director of Training, Marketing, and Economic Development, National Technology Transfer Center, Wheeling, West Virginia; Tina McKinley, Chair, Federal Laboratory Consortium, Oak Ridge Institute for Science and Education, Oak Ridge, Tennessee; Dr. Robert Templin, Jr., President, Virginia's Center for Innovative Technology, Herndon, Virginia; John T. Preston, Director, Technology Development Association of University Technology Managers, Cambridge, Massachusetts; Ambassador C. Paul Robinson, Vice President, Laboratory Development, Sandia National Laboratory; Richard Marczewski, Manager, Technology Transfer Office, National Renewable Energy Laboratory; Dr. Peter B. Lyons, Director, Industrial Partnership Office, Los Alamos National Laboratory; William Martin, Vice President, Office of Technology Transfer, Lockheed-Martin Energy Systems, Oak Ridge National Laboratory; Thomas F. Fortin, Vice-President, Rio Grande Medical Technologies, Inc., Albuquerque, New Mexico; William Elkins, Chairman and Director

of Product Development, Life Enhancement Technologies, Mountain View, California; and Michael G. Ury, Vice President, Research & Development, Fusion Lighting, Rockville, Maryland.

Panel 1: Mr. Joseph Allen, Director of Training, Marketing and Economic Development at the National Technology Transfer Center, commended Mrs. Morella on her legislation. He identified three key components of the legislation: (1) it is market-driven; (2) there are incentives for laboratories and scientists; and (3) intellectual property is given to companies that commercialize the technology. He stated the ultimate goal should be linking federal laboratories, universities, and state and local business assistance programs strategically with United States industry in locally led initiatives.

Dr. Robert Templin, President of Virginia's Center for Innovative Technology, stated that assessing the return on investment from technology transfer is difficult, but crucial. He also commented on the need to get authority to the local laboratories so the labs can enter into agreements, allowing them to be more responsive to market-driven needs. Dr. Templin stated the bill would forge effective partnerships by making them more responsive and timely.

Ms. Tina McKinley, Chair of the Federal Laboratory Consortium at the Oak Ridge Institute for Science and Education, testified to her support for the legislation, and indicated it will contribute to the speed and effectiveness of federal technology transfer. She explained that all technology is different and volatile, and flexibility is necessary: laboratories have to be able to select from a range of mechanisms depending on the local situation. Mr. John Preston, Director of Technology Development at MIT, representing the Association of University Technology Managers, stated that we must use technology transfer to remain competitive internationally. The net effect of the delay in commercializing technology, he added, is that American ideas and inventions are adopted by foreign competitors rather than United States companies. He said we should, "even the playing field by creating industrial research competitiveness that rivals what our foreign competitors are doing." He stated that there is a critical need for new approaches to technology commercialization, and that we need to have the courage to lower the bureaucracy that stifles entrepreneurship. Mr. Preston indicated his support for the bill.

Panel 2: Ambassador C. Paul Robinson, Vice President, Laboratory Development, Sandia National Laboratory, testified on the uniqueness of the Nation's DOE laboratories as "multi-problem solvers" for U.S. industry, which is what industry seeks and what the labs can best deliver. Ambassador Robinson believes the process by which technology partnerships are developed should be streamlined to improve efficiency. In response to criticism that technology partnerships were giveaways to individual companies, he stated that Sandia is increasingly working with a consortium of U.S. companies. He stated that the federal laboratories benefit by seeking ways their long-term goals can be leveraged by industry's aims. Ambassador Robinson stated his support for the principles of H.R. 2196.

Mr. Ronald W. Cochran of Lawrence Livermore National Laboratory, testified that industrial partnering is vital to the future success of Livermore's programs. He stressed that continued congres-

sional leadership is essential to further refine the technology transfer system and keep it viable. Mr. Cochran also expressed support for the bill as a way to build on past experience with industrial partnering. He also stated the laboratories must have many options available when seeking out technology partnerships and to listen to industry as the best way to gauge the effectiveness of partnerships.

Mr. Richard Marczewski of the National Renewable Energy Laboratory (NREL), testified that a CRADA is only one mechanism used by his laboratory to transfer technology and that the laboratories should have a variety of mechanisms at their disposal to bring technology to the market. He further stated that NREL plans to increase its use of licensing in the future and will actively seek access to foreign markets by acquiring foreign patents. He testified that he shares the bill's general goals on improving technology transfer.

Dr. Peter Lyons of Los Alamos National Laboratory, testified that reducing the global nuclear danger is Los Alamos' central mission and the labs must use the best sources of domestic science and technology to meet such a multi-faceted goal. Therefore, Dr. Lyons feels alliances with industry are very important to sustain and to expand that base of domestic science and technology. He feels partnerships with industry help Los Alamos' core competencies and agrees with the need for flexibility in finding ways to work with industry. He voiced support for provisions within the bill which strengthen the CRADA mechanism.

Mr. William Martin of Oak Ridge National Laboratory, testified that the bill is a "win-win" situation for government and the private sector. Mr. Martin stated that federal agencies must fulfill their missions as assigned by Congress and what should be addressed at this time is how to improve the process of technology transfer. One improvement which should be made, according to Mr. Martin, is to make industry better aware of the applicability of government-developed technology. Further, he expressed a need to get industry involved earlier in the R&D process and reduce bureaucratic barriers to technology transfer.

Panel 3: Mr. Michael Ury, Mr. Tom Fortin, and Mr. William Elkins gave the industry perspective in working with federal laboratories and the success of technology transfer programs. All three supported the CRADA mechanism and the concepts of H.R. 2196.

Maintaining Our International Competitiveness: The Importance of Standards and Conformity Assessment on Industry

On June 29, 1995, the Subcommittee on Technology held a hearing to receive testimony regarding the importance of standards and conformity assessment on industry. Witnesses discussed recommendations made in the National Research Council's report, released March 1995, entitled "Standards, Conformity Assessment, and Trade in the 21st Century."

Panel 1: Dr. Gary Hufbauer, Senior Fellow at the Institute for International Economics, testified as Chairman of the National Research Council's International Standards, Conformity Assessment, and U.S. Trade Policy Project Committee. This Committee was responsible for the research and development of the NRC report. He stated that the Committee looked at two areas: (1) the voluntary

consensus standard setting system; and (2) conformity assessment, the system for measuring and certifying conformance to standards. While the report found that the standards development process works well, the NRC recommended several changes in the conformity assessment system. Dr. Hufbauer said the conformity assessment system has unnecessary duplication among federal and local governments. The Committee's recommendations, he explained, give the National Institute of Standards and Technology (NIST) the lead role by assigning them the responsibility of phasing out federally-operated conformity assessment activities and asking them to work with state and local governments to eliminate duplicative accreditation systems.

Ms. Amy Marasco, Vice President and General Counsel of the American National Standards Institute (ANSI), stated that the OMB Circular A-119 needs Congressional backing to be effective. She said it is in the best interests of the nation to require federal employees to participate in the voluntary consensus standards process and to require federal agencies to adopt voluntary consensus standards whenever it is practical and feasible.Dr. Belinda Collins, Director of Standards at NIST, testified that the federal government's role in the standards process is to be both a partner and a participant with the private sector. She stressed that NIST is looking forward to coordinating activities in the standards process, but that NIST should not be "policing" activities. She also stated that recognizing NIST as the lead agency for coordinating conformity assessment activities is a positive step since there has not previously been any federal agency assigned to that task, and conformity assessment is much more of a decentralized, omplicated activity than standards development.

Panel 2: Dr. Louis Dixon, Automotive Safety and Engineering Standards of Ford Motor Company, testified about the importance of efficient conformity assessment. He said manufacturers and consumers are significantly affected by the cost of redundant conformity assessment activities. He added, "where certifications are required, certifications should be based on one assessment, from one location, and should be acceptable anywhere in the world."

Mr. Gerald Ritterbusch, Manager of Product Safety and Environmental Control at Caterpillar, Inc., testified regarding changes needed in the conformity assessment process. He stated the public sector should handle assessment and accreditation, and the federal government can step in at the recognition level. Government support, he said, is absolutely essential.Mr. Walter Poggi, President of Retlif Testing Laboratories and representing American Council of Independent Laboratories (ACIL), stated he was testifying as a small businessman and that he disagreed with some of the NRC's recommendations. He said he does not think it is practical for every federal agency to stop performing conformity assessment activities and indicated it is counter to the international trend. He also felt the standards development process is slow, costly and discriminates against small business. Mr. Stephen Oksala, Director of Corporate Standards at Unisys Corporation, said he agreed with most of the NRC's recommendations and stressed the importance of industry leadership in the standards development partnership. He said, "move the standards and conformity assessment infra-

structures from the public to the private sector, and let the federal government concentrate on supporting that process through participation, recognition, and harmonization."

Mr. Rod Lee, Senior Vice President of Lithonia Lighting, and representing the National Electrical Manufacturers Association (NEMA), provided testimony regarding the lighting fixture industry as an example of a government agency mandating a standards policy and not using the voluntary consensus standard system. He stated that the government is mandating that lighting equipment be provided in modular, hard metric increments. He explained that the manufacturer's current standardized machine tool can not produce the hard metric fixture, required by government regulation, and it would be extremely expensive to adhere strictly to the federal guidelines. In addition, he added, the lighting industry does not believe there is any value added to the industry in adopting nonstandard equipment only for the government, while the private sector has not indicated any demand for the hard metric fixtures.

IX. Summary of Committee Actions

a. Subcommittee Markup

On October 18, 1995, the Technology Subcommittee of the House Science Committee held a subcommittee markup of H.R. 2196. One amendment, in the nature of a substitute, was offered by Chairwoman Morella.

The amendment in the nature of a substitute, renamed H.R. 2196 as "the National Technology Transfer and Advancement Act of 1995." The amendment also incorporated the original base text of H.R. 2196 and added certain provisions, affecting the National Institute of Standards and Technology (NIST), among others, which were passed by the House in H.R. 2405, the Omnibus Civilian Science Authorization Act of 1995.

These added provisions included administrative management amendments affecting the National Institute of Standards and Technology (NIST). The provisions permit NIST to continue hiring the "best and the brightest" scientists by permanently extending the NIST Personnel Demonstration Program and increase the cap on its Postdoctoral Fellows Program. Other changes included: providing authority for federal laboratories to give excess scientific equipment to public and private schools; expansion of membership of the NIST Visiting Committee; and creating authority for a Metro Shuttle for NIST employees. Additional provisions in the amendment related to the Fastener Quality Act and the federal use of standards.

The amendment in the nature of a substitute was adopted by voice vote. The Technology Subcommittee then reported, by voice vote with a quorum present, H.R. 2196, as amended, to the full Committee for consideration.

b. Committee Markup

On October 25, 1995, the Science Committee convened to consider H.R 2196. Four amendments were offered in the following order:

(1) En Bloc amendment offered by Mrs. Morella. The en bloc amendment made technical changes suggested by witnesses at the

June 27, 1995 joint hearing before the Technology and Basic Research Subcommittees on H.R. 2196 and federal technology transfer. Adopted by voice vote.

(2) Amendment regarding use of private voluntary standards offered by Mrs. Morella. This amendment accomplishes two objectives: (1) codifies the present requirements of OMB Circular A-119 that requires federal agencies to adopt and use standards developed by voluntary consensus standards bodies and to work closely with those organizations to ensure that the developed standards are consistent with agency needs; and (2) requires federal agencies, through the Office of Management and Budget, to annually report to Congress on the reasons for deviating from voluntary consensus standards when the head of the agency deems that those consensus standards are not appropriate to the agency's needs. Adopted by voice vote.

(3) Amendment to strike Section 11 of the Act offered by Mr. Brown. The amendment sought to strike Section 11, the Fastener Quality Act Amendments. Defeated by voice vote.

(4) Sense of Congress Amendment offered by Mr. Brown. Sense of Congress amendment that the Malcolm Baldrige National Quality Award program offers substantial benefits to United States industry, and that all funds appropriated for such programs should be spent in support of the goals of the program. Adopted by voice vote.

With a quorum present, the Committee adopted and ordered reported H.R. 2196, as amended, to the House of Representatives by voice vote.

X. Congressional Budget Office Analysis and Cost Estimates

Clause 2(l)(3)(c) of rule XI requires each Committee Report to include a cost estimate prepared by the Director of the Congressional Budget Office, pursuant to section 403 of the Congressional Budget Act of 1974, if the cost estimate is timely submitted. The following is the Congressional Budget Office estimate:

U.S. Congress,
Congressional Budget Office,
Washington, DC, November 8, 1995.

Hon. Robert S. Walker,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has reviewed H.R. 2196, the National Technology Transfer and Advancement Act of 1995, as ordered reported by the House Committee on Science on October 25, 1995. We estimate that implementing this bill would cost a total of $10 million over the next five years, assuming appropriation of the necessary funds. In addition, provisions regarding the expenditure of license-related income would increase direct spending during this period but the impacts would not be significant.

Because H.R. 2196 would affect direct spending, the bill would be subject to pay-as-you-go procedures. The bill would not affect the budgets of state or local governments.

Bill Purpose. H.R. 2196 would revise statutory guidelines for various Federal activities promoting technology transfer. The bill would clarify government policies for cooperative research and development agreements (CRADA's), especially with regard to rights to intellectual property and allowable contributions and expenditures. Policies for the distribution of royalties collected by the government under technology licensing agreements also would be modified. The bill would earmark a higher portion of the annual income from licenses for payments to inventors or coinventors, raise the ceiling on the amounts that can be paid to inventors, allow government laboratories to reinvest any remaining proceeds in related research initiatives, and extend the time allowed for agencies to obligate the proceeds by one year.

In addition, H.R. 2196 would provide new directives for the National Institute of Standards and Technology (NIST). It would authorize an increase in the number of postdoctorate positions from 40 to 60, and would authorize the agency to provide regular shuttle service connecting the Gaithersburg campus to the Washington subway system. The bill also would expand the membership of NIST's visiting committee from 9 to 15 members. Finally, the bill would amend the provisions of the Fasteners Quality Act regarding laboratory accreditation, commingling of fasteners, and enforcement of the Act.

Federal Budgetary Impact. If enacted, H.R. 2196 would affect both discretionary spending and direct spending. CBO estimates that increasing the number of postdoctorate positions at NIST would result in costs to the Federal Government of about $2 million in fiscal year 1996 and $10 million over the 1996-2000 period, assuming appropriation of the necessary amounts.

Giving agencies an additional year to obligate income from royalties would increase direct spending because funds that currently lapse would now be spent instead of being returned to the Treasury. CBO estimates that the impact of this change in direct spending would not be significant because the amounts that lapse under existing law are small (less than $100,000 a year). Changing the guidelines for CRADA's would have no net budgetary impact because any additional collections from royalties resulting from the new policies would be matched by an increase in spending for either payments to inventors or related agency programs. Other provisions of the bill would have no significant budgetary impact.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts are Kathleen Gramp and Rachel Forward, who can be reached at 226-2860.

Sincerely,

JUNE O'NEILL, *Director.*

cc: Hon. George E. Brown, Jr.,
Ranking Minority Member

DECEMBER 1, 1995

MEMORANDUM

TO: Ben Wu
FROM: Kathy Gramp
SUBJECT: Pay-as-you-go effects of H.R. 2196

On November 8, 1995, CBO provided a cost estimate for H.R. 2196, the National Technology Transfer and Advancement Act of 1995, as ordered reported by the House Committee on Science on October 25, 1995. As explained in that letter, this bill would affect direct spending because of provisions involving income and expenditures related to licenses and CRADA's, but we estimate that the impact on direct spending would not be significant (less than $100,000).

Section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985 sets up pay-as-you-go procedures for legislation affecting direct spending or receipts through 1998. Because H.R. 2196 would affect direct spending, the bill would be subject to pay-as-you-go procedures. At your request, I have prepared a table that shows the estimated pay-as-you-go impacts described in the November 8 estimate.

	(by fiscal year, in millions of dollars)		
	1996	1997	1998
Change in outlays	0	0	0
Change in receipts	n/a	n/a	n/a

Please give me a call if you have any questions.

XI. EFFECT OF LEGISLATION ON INFLATION

In accordance with rule XI, clause 2(1)(4) of the Rules of the House of Representatives, this legislation is assumed to have no inflationary effect on prices and costs in the operation of the national economy.

XII. OVERSIGHT FINDINGS AND RECOMMENDATIONS

Clause 2(1)(3)(A) of rule XI requires each Committee Report to contain oversight findings and recommendations required pursuant to clause 2(b)(1) of rule X. The Committee has no oversight findings.

XIII. OVERSIGHT FINDINGS AND RECOMMENDATIONS BY THE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT

Clause 2(1)(3)(D) of rule XI requires each Committee Report to contain a summary of the oversight findings and recommendations made by the House Government Reform and Oversight Committee pursuant to clause 4(c)(2) of rule X, whenever such findings have been timely submitted. The Committee on Science has received no such findings or recommendations from the Committee on Government Reform and Oversight.

XIV. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italics, existing law in which no change is proposed is shown in roman):

STEVENSON–WYDLER TECHNOLOGY INNOVATION ACT OF 1980

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SEC. 11. UTILIZATION OF FEDERAL TECHNOLOGY.

(a) * * *

* * * * * * *

(e) ESTABLISHMENT OF FEDERAL LABORATORY CONSORTIUM FOR TECHNOLOGY TRANSFER.—(1) * * *

* * * * * * *

(7)(A) Subject to subparagraph (B), an amount equal to 0.008 percent of the budget of each Federal agency from any Federal source, including related overhead, that is to be utilized by or on behalf of the laboratories of such agency for a fiscal year referred to in subparagraph (B)(ii) shall be transferred by such agency to the National Institute of Standards at the beginning of the fiscal year involved. Amounts so transferred shall be provided by the Institute to the Consortium for the purpose of carrying out activities of the Consortium under this subsection.

[(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if—

[(i) the amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000; and

[(ii) such transfer is made with respect to the fiscal year 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, or 1996.]

(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if the amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000.

* * * * * * *

(i) RESEARCH EQUIPMENT.—The Director of a laboratory, or the head of any Federal agency or department, may *loan, lease,* give research equipment that is excess to the needs of the laboratory, agency, or department to an educational institution or nonprofit organization for the conduct of technical and scientific education and research activities. *Actions taken under this subsection shall not be subject to Federal requirements on the disposal of property.* Title of ownership shall transfer with a gift under the section.

SEC. 12. COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

(a) * * *

[(b) ENUMERATED AUTHORITY.—Under agreements entered into pursuant to subsection (a)(1), a Government-operated Federal

laboratory, and, to the extent provided in an agency-approved joint work statement, a Government-owned, contractor-operated laboratory, may (subject to subsection (c) of this section)—

[(1) accept, retain, and use funds, personnel, services, and property from collaborating parties and provide personnel, services, and property to collaborating parties;

[(2) grant or agree to grant in advance, to a collaborating party, patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under the agreement, retaining a nonexclusive, nontransferrable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government and such other rights as the Federal laboratory deems appropriate;

[(3) waive, subject to reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of a collaborating party;

[(4) determine rights in other intellectual property developed under an agreement entered into under subsection (a)(1); and

[(5) to the extent consistent with any applicable agency requirements and standards of conduct, permit employees or former employees of the laboratory to participate in efforts to commercialize inventions they made while in the service of the United States.

A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement under subsection (a)(1) may use or obligate royalties or other income accruing to such laboratory under such agreement with respect to any invention only (i) for payments to inventors; (ii) for the purposes described in section 14(a)(1)(B) (i), (ii), and (iv); and (iii) for scientific research and development consistent with the research and development mission and objectives of the laboratory.]

(b) ENUMERATED AUTHORITY.—(1) Under an agreement entered into pursuant to subsection (a)(1), the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under the agreement, for reasonable compensation when appropriate. The laboratory shall ensure, through such agreement, that the collaborating party has the option to choose an exclusive license for a field of use for any such invention under the agreement or, if there is more than one collaborating party, that the collaborating parties are offered the option to hold licensing rights that collectively encompass the rights that would be held under such an exclusive license by one party. In consideration for the Government's contribution under the agreement, grants under this paragraph shall be subject to the following explicit conditions:

(A) A nonexclusive, nontransferable, irrevocable, paid-up license from the collaborating party to the laboratory to practice

the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of section 552(b)(4) of title 5, United States Code, or which would be considered as such if it had been obtained from a non-Federal party.

(B) If a laboratory assigns title or grants an exclusive license to such an invention, the Government shall retain the right—

(i) to require the collaborating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in the applicant's licensed field of use, on terms that are reasonable under the circumstances; or

(ii) if the collaborating party fails to grant such a license, to grant the license itself.

(C) The Government may exercise its right retained under subparagraphs (B) (ii) and (iii) only if the Government finds that—

(i) the action is necessary to meet health or safety needs that are not reasonably satisfied by the collaborating party;

(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the collaborating party; or

(iii) the collaborating party has failed to comply with an agreement containing provisions described in subsection (c)(4)(B).

(2) Under agreements entered into pursuant to subsection (a)(1), the laboratory shall ensure that a collaborating party may retain title to any invention made solely by its employee in exchange for normally granting the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government for research or other Government purposes.

(3) Under an agreement entered into pursuant to subsection (a)(1), a laboratory may—

(A) accept, retain, and use funds, personnel, services, and property from a collaborating party and provide personnel, services, and property to a collaborating party;

(B) use funds received from a collaborating party in accordance with subparagraph (A) to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency;

(C) to the extent consistent with any applicable agency requirements or standards of conduct, permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government; and

(D) waive, subject to reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or

on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of a collaborating party.

(4) A collaborating party in an exclusive license in any invention made under an agreement entered into pursuant to subsection (a)(1) shall have the right of enforcement under chapter 29 of title 35, United States Code.

(5) A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement pursuant to subsection (a)(1) may use or obligate royalties or other income accruing to the laboratory under such agreement with respect to any invention only—

(A) for payments to inventors;

(B) for a purposes described in clauses (i), (ii), (iii), and (iv) of section 14(a)(1)(B); and

(C) for scientific research and development consistent with the research and development missions and objectives of the laboratory.

* * * * * * *

SEC. 14. DISTRIBUTION OF ROYALTIES RECEIVED BY FEDERAL AGENCIES.

(a) IN GENERAL.—[(1) Except as provided in paragraphs (2) and (4), any royalties or other income received by a Federal agency from the licensing or assignment of inventions under agreements entered into by Government-operated Federal laboratories under section 12, and inventions of Government-operated Federal laboratories licensed under section 207 of title 35, United States Code, or under any other provision of law, shall be retained by the agency whose laboratory produced the invention and shall be disposed of as follows:

[(A)(i) The head of the agency or his designee shall pay at least 15 percent of the royalties or other income the agency receives on account of any invention to the inventor (or co-inventors) if the inventor (or each such co-inventor) has assigned his or her rights in the invention to the United States. This clause shall take effect on the date of the enactment of this section unless the agency publishes a notice in the Federal Register within 90 days of such date indicating its election to file a Notice of Proposed Rulemaking pursuant to clause (ii).

[(ii) An agency may promulgate, in accordance with section 553 of title 5, United States Code, regulations providing for an alternative program for sharing royalties with inventors under clause (i). Such regulations must—

[(I) guarantee a fixed minimum payment to each such inventor, each year that the agency receives royalties from that inventor's invention;

[(II) provide a percentage royalty share to each such inventor, each year that the agency receives royalties from that inventor's invention in excess of a threshold amount;

[(III) provide that total payments to all such inventors shall exceed 15 percent of total agency royalties in any given fiscal year; and

[(IV) provide appropriate incentives from royalties for those laboratory employees who contribute substantially to the technical development of a licensed invention between the time of the filing of the patent application and the licensing of the invention.

[(iii) An agency that has published its intention to promulgate regulations under clause (ii) may elect not to pay inventors under clause (i) until the expiration of two years after the date of the enactment of this Act or until the date of the promulgation of such regulations, whichever is earlier. If an agency makes such an election and after two years the regulations have not been promulgated, the agency shall make payments (in accordance with clause (i)) of at least 15 percent of the royalties involved, retroactive to the date of the enactment of this Act. If promulgation of the regulations occurs within two years after the date of the enactment of this Act, payments shall be made in accordance with such regulations, retroactive to the date of the enactment of this Act. The agency shall retain its royalties until the inventor's portion is paid under either clause (i) or (ii). Such royalties shall not be transferred to the agency's Government-operated laboratories under subparagraph (B) and shall not revert to the Treasury pursuant to paragraph (2) as a result of any delay caused by rulemaking under this subparagraph.

[(B) The balance of the royalties or other income shall be transferred by the agency to its Government-operated laboratories, with the majority share of the royalties or other income from any invention going to the laboratory where the invention occurred; and the funds so transferred to any such laboratory may be used or obligated by that laboratory during the fiscal year in which they are received or during the succeeding fiscal year—

[(i) for payment of expenses incidental to the administration and licensing of inventions by that laboratory or by the agency with respect to inventions which occurred at that laboratory, including the fees or other costs for the services of other agencies, persons, or organizations for invention management and licensing services;

[(ii) to reward scientific, engineering, and technical employees of that laboratory, including payments to inventors and developers of sensitive or classified technology, regardless of whether the technology has commercial applications;

[(iii) to further scientific exchange among the Government-operated laboratories of the agency; or

[(iv) for education and training of employees consistent with the research and development mission and objectives of the agency, and for other activities that increase the licensing potential for transfer of the technology of the laboratories of the agency.

Any of such funds not so used or obligated by the end of the fiscal year succeeding the fiscal year in which they are received shall be paid into the Treasury of the United States.]

(1) Except as provided in paragraphs (2) and (4), any royalties or other payments received by a Federal agency from the licensing and assignment of inventions under agreements entered into by Federal laboratories under section 12, and from the licensing of inventions

of Federal laboratories under section 207 of title 35, United States Code, or under any other provision of law, shall be retained by the laboratory which produced the invention and shall be disposed of as follows:

(A)(i) The head of the agency or laboratory, or such individual's designee, shall pay each year the first $2,000, and thereafter at least 15 percent, of the royalties or other payments to the inventor or coinventors.

(ii) An agency or laboratory may provide appropriate incentives, from royalties, or other payments, to laboratory employees who are not an inventor of such inventions but who substantially increased the technical value of such inventions.

(iii) The agency or laboratory shall retain the royalties and other payments received from an invention until the agency or laboratory makes payments to employees of a laboratory under clause (i) or (ii).

(B) The balance of the royalties or other payments shall be transferred by the agency to its laboratories, with the majority share of the royalties or other payments from any invention going to the laboratory where the invention occurred. The royalties or other payments so transferred to any laboratory may be used or obligated by that laboratory during the fiscal year in which they are received or during the succeeding fiscal year—

(i) to reward scientific, engineering, and technical employees of the laboratory, including developers of sensitive or classified technology, regardless of whether the technology has commercial applications;

(ii) to further scientific exchange among the laboratories of the agency;

(iii) for education and training of employees consistent with the research and development missions and objectives of the agency or laboratory, and for other activities that increase the potential for transfer of the technology of the laboratories of the agency;

(iv) for payment of expenses incidental to the administration and licensing of intellectual property by the agency or laboratory with respect to inventions made at that laboratory, including the fees or other costs for the services of other agencies, persons, or organizations for intellectual property management and licensing services; or

(v) for scientific research and development consistent with the research and development missions and objectives of the laboratory.

(C) All royalties or other payments retained by the agency or laboratory after payments have been made pursuant to subparagraphs (A) and (B) that is unobligated and unexpended at the end of the second fiscal year succeeding the fiscal year in which the royalties and other payments were received shall be paid into the Treasury.

(2) If, after payments to inventors under paragraph (1), the royalties *or other payments* received by an agency in any fiscal year exceed 5 percent of the budget of the Government-operated laboratories of the agency for that year, 75 percent of such excess shall be paid to the Treasury of the United States and the remaining 25

percent may be used or obligated [for the purposes described in clauses (i) through (iv) of paragraph (1)(B) during that fiscal year or the succeeding fiscal year] *under paragraph (1)(B).* Any funds not so used or obligated shall be paid into the Treasury of the United States.

(3) Any payment made to an employee under this section shall be in addition to the regular pay of the employee and to any other awards made to the employee, and shall not affect the entitlement of the employee to any regular pay, annuity, or award to which he is otherwise entitled or for which he is otherwise eligible or limit the amount thereof. Any payment made to an inventor as such shall continue after the inventor leaves the laboratory or agency. Payments made under this section shall not exceed [$100,000] *$150,000* per year to any one person, unless the President approves a larger award (with the excess over [$100,000] *$150,000* being treated as a Presidential award under section 4504 of title 5, United States Code).

(4) A Federal agency receiving royalties or other [income] *payments* as a result of invention management services performed for another Federal agency or laboratory under section 207 of title 35, United States Code, may retain such royalties or [income] *payments* to the extent required to offset [the payment of royalties to inventors] *payments to inventors* under clause (i) of paragraph (1)(A), costs and expenses incurred under clause [(i)] *(iv)* of paragraph (1)(B), and the cost of foreign patenting and maintenance for any invention of the other agency. All royalties and other [income] *payments* remaining after [payment of the royalties,] *offsetting the payments to inventors,* costs, and expenses described in the preceding sentence shall be transferred to the agency for which the services were performed, for distribution in accordance with [clauses (i) through (iv) of] paragraph (1)(B).

(b) CERTAIN ASSIGNMENTS.—If the invention involved was one assigned to the Federal agency—

[(1) by a contractor, grantee, or participant in a cooperative agreement with the agency, or]

(1) by a contractor, grantee, or participant, or an employee of a contractor, grantee, or participant, in an agreement or other arrangement with the agency, or

* * * * * * *

SEC. 15. EMPLOYEE ACTIVITIES.

(a) IN GENERAL.—If a Federal agency which has [the right of ownership to an invention under this Act] *ownership of or the right of ownership to an invention made by a Federal employee* does not intend to file for a patent application or otherwise to promote commercialization of such invention, the agency shall allow the inventor, if the inventor is a Government employee or former employee who made the invention during the course of employment with the Government, to *obtain or* retain title to the invention (subject to reservation by the Government of a nonexclusive, nontransferrable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government). In addition, the agency may condition the inventor's right to title on the timely filing of a patent application in cases

when the Government determines that it has or may have a need to practice the invention.

* * * * * * *

SECTION 210 OF TITLE 35, UNITED STATES CODE

§ 210. Precedence of chapter

(a) * * *

* * * * * * *

(e) The provisions of the Stevenson-Wydler Technology Innovation Act of 1980[, as amended by the Federal Technology Transfer Act of 1986,] shall take precedence over the provisions of this chapter to the extent that they permit or require a disposition of rights in subject inventions which is inconsistent with this chapter.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT

* * * * * * *

ESTABLISHMENT, FUNCTIONS, AND ACTIVITIES

SEC. 2. (a) There is established within the Department of Commerce a science, engineering, technology, and measurement laboratory to be known as the National Institute of Standards and Technology (hereafter in this Act referred to as the "Institute").

(b) The Secretary of Commerce (hereafter in this Act referred to as the "Secretary") acting through the Director of the Institute (hereafter in this Act referred to as the "Director") and, if appropriate, through other officials, is authorized to take all actions necessary and appropriate to accomplish the purposes of this Act, including the following functions of the Institute—

(1) to assist industry in the development of technology and procedures needed to improve quality, to modernize manufacturing processes, to ensure product reliability, manufacturability, functionality, and cost-effectiveness, and to facilitate the more rapid commercialization, especially by small- and medium-sized companies throughout the United States, of products based on new scientific discoveries in fields such as automation, electronics, advanced materials, biotechnology, and optical technologies;

(2) to develop, maintain, and retain custody of the national standards of measurement, and provide the means and methods for making measurements consistent with those standards[, including comparing standards used in scientific investigations, engineering, manufacturing, commerce, industry, and educational institutions with the standards adopted or recognized by the Federal Government];

(3) to compare standards used in scientific investigations, engineering, manufacturing, commerce, industry, and educational institutions with the standards adopted or recognized

by the Federal Government and to coordinate the use by Federal agencies of private sector standards, emphasizing where possible the use of standards developed by private, consensus organizations;

[(3)] *(4)* to enter into contracts, including cooperative research and development arrangements, in furtherance of the purposes of this Act;

[(4)] *(5)* to provide United States industry, Government, and educational institutions with a national clearinghouse of current information, techniques, and advice for the achievement of higher quality and productivity based on current domestic and international scientific and technical development;

[(5)] *(6)* to assist industry in the development of measurements, measurement methods, and basic measurement technology;

[(6)] *(7)* to determine, compile, evaluate, and disseminate physical constants and the properties and performance of conventional and advanced materials when they are important to science, engineering, manufacturing, education, commerce, and industry and are not available with sufficient accuracy elsewhere;

[(7)] *(8)* to develop a fundamental basis and methods for testing materials, mechanisms, structures, equipment, and systems, including those used by the Federal Government;

[(8)] *(9)* to assure the compatibility of United States national measurement standards with those of other nations;

[(9)] *(10)* to cooperate with other departments and agencies of the Federal Government, with industry, with State and local governments, with the governments of other nations and international organizations, and with private organizations in establishing standard practices, codes, specifications, and voluntary consensus standards;

[(10)] *(11)* to advise government and industry on scientific and technical problems; [and]

[(11)] *(12)* to invent, develop, and (when appropriate) promote transfer to the private sector of measurement devices to serve special national needs[.]; *and*

(13) to coordinate Federal, State, local, and private sector standards conformity assessment activities, with the goal of eliminating unnecessary duplication and complexity in the development and promulgation of conformity assessment requirements and measures.

* * * * * * *

VISITING COMMITTEE ON ADVANCED TECHNOLOGY

SEC. 10. (a) There is established within the Institute a Visiting Committee on Advanced Technology (hereafter in this Act referred to as the "Committee"). The Committee shall consist of [nine] *15* members appointed by the Director, at least [five] *10* of whom shall be from United States industry. The Director shall appoint as original members of the Committee any final members of the National Bureau of Standards Visiting Committee who wish to serve in such capacity. In addition to any powers and functions otherwise

granted to it by this Act, the Committee shall review and make recommendations regarding general policy for the Institute, its organization, its budget, and its programs within the framework of applicable national policies as set forth by the President and the Congress.

* * * * * * *

SEC. 15. In the performance of the functions of the Institute the Secretary of Commerce is authorized to undertake the following activities: (a) The purchase, repair, and cleaning of uniforms for guards; (b) the care, maintenance, protection, repair, and alteration of Institute buildings and other plant facilities, equipment, and property. (c) the rental of field sites and laboratory, office, and warehouse space; (d) the purchase of reprints from technical journals or other periodicals and the payment of page charges for the publication of research papers and reports in such journals; (e) the furnishing of food and shelter without repayment therefor to employees of the Government at Arctic and Antarctic stations; (f) for the conduct of observations on radio propagation phenomena in the Arctic or Antarctic regions, the appointment of employees at base rates established by the Secretary of Commerce which shall not exceed such maximum rates as may be specified from time to time in the appropriation concerned, and without regard to the civil service and classification laws and titles II and III of the Federal Employees Pay Act of 1945; [and] (g) the erection on leased property of specialized facilities and working and living quarters when the Secretary of Commerce determines that this will best serve the interests of the Government*; and (h) the provision of transportation services for employees of the Institute between the facilities of the Institute and nearby public transportation, notwithstanding section 1344 of title 31, United States Code.*

* * * * * * *

SEC. 19. The Institute in conjunction with the National Academy of Sciences, shall establish and conduct a post-doctoral fellowship program which shall be organized and carried out in substantially the same manner as the National Academy of Sciences/National Research Council Post-Doctoral Research Associate Program that was in effect prior to 1986, and which shall include not less than twenty nor more than [forty] *60* new fellows per fiscal year.

* * * * * * *

FASTENER QUALITY ACT

SECTION 1. SHORT TITLE.

This Act may be cited as the "Fastener Quality Act".

SEC. 2. FINDINGS AND PURPOSE.

(a) FINDINGS.—The Congress finds that—

(1) * * *

* * * * * * *

[(4) the sale in commerce of nonconforming fasteners and the use of nonconforming fasteners in numerous critical appli-

cations have reduced the combat readiness of the Nation's military forces, endangered the safety of other Federal projects and activities, and cost both the public and private sectors large sums in connection with the retesting and purging of fastener inventories;]

[(5)] *(4)* the purchase and use of nonconforming fasteners stem from material misrepresentations about such fasteners made by certain manufacturers, importers, and distributors engaged in commerce;

[(6)] *(5)* current fastener standards of measurement evaluate bolts and other fasteners according to multiple criteria, including strength, hardness, and composition, and provide grade identification markings on fasteners to make the characteristics of individual fasteners clear to purchasers and users;

[(7)[*(6)* current tests required by consensus standards, designed to ensure that fasteners are of standard measure, are adequate and appropriate for use as standards in a program of high-strength fastener testing;

[(8)] *(7)* the lack of traceability [by lot number] of fasteners sold in commerce is a serious impediment to effective quality control efforts; and

[(9)] *(8)* the health and safety of Americans is threatened by the widespread sale in commerce of mismarked, substandard, and counterfeit fasteners, a practice which also harms American manufacturers, importers, and distributors of safe and conforming fasteners, and workers in the American fastener industry.

(b) PURPOSE.—In order to protect public safety, to deter the introduction of nonconforming fasteners into commerce, to improve the traceability of fasteners [used in critical applications] *in commerce*, and generally to provide commercial and governmental customers with greater assurance that fasteners meet stated specifications, it is the purpose of this Act to create procedures for the testing, certification, and distribution of certain fasteners used in commerce within the United States.

SEC. 3. DEFINITIONS.

As used in this Act, the term—

(1) "alter" means to alter—

(A) by through-hardening,

(B) by electroplating of fasteners [having a minimum tensile strength of 150,000 pounds per square inch] *having a minimum Rockwell C hardness of 40 or above*, or

(C) by machining;

(2) "consensus standards organization" means the American Society for Testing and Materials, American National Standards Institute, American Society of Mechanical Engineers, Society of Automotive Engineers, or any other *consensus* standard-setting organization determined by the Secretary to have comparable knowledge, expertise, and concern for health and safety in the field for which such organization purports to set standards;

* * * * * * *

(5) "fastener" means—

(A) a—

(i) screw, nut, bolt, or stud having internal or external threads, or

* * * * * * *

(B) a screw, nut, bolt, or stud having internal or external threads which bears a grade identification marking required by a standard or specification, *or*

(C) a washer to the extent that it is subject to a standard or specification applicable to a screw, nut, bolt, or stud described in subparagraph (B), [or

[(D) any item within a category added by the Secretary in accordance with section 4(b),]

except that such term does not include any screw, nut, bolt, or stud that is produced and marked as ASTM A 307 Grade A *or produced in accordance with ASTM F 432*;

(6) "grade identification marking" means any symbol appearing on a fastener purporting to indicate that the fastener's base material, strength properties, or performance capabilities conform to a specific standard of a consensus standards organization or [other person] *government agency*;

* * * * * * *

(8) "Institute" means the National Institute of [Standard] *Standards* and Technology;

* * * * * * *

[(11) "original equipment manufacturer" means a person who uses fasteners in the manufacture or assembly of its products and sells fasteners to authorized dealers as replacement or service parts for its products;]

[(12)] *(11)* "private label distributor" means a person who contracts with a manufacturer for the fabrication of fasteners bearing the distributor's distinguishing insignia;

[(13)] *(12)* "Secretary" means the Secretary of Commerce;

[(14)] *(13)* "standards and specifications" means the provisions of a document published by a consensus standards organization[, a government agency, or a major end-user of fasteners which defines or describes dimensional characteristics, limits of size, acceptable materials, processing, functional behavior, plating, baking, inspecting, testing, packaging, and required markings of any fastener] *or a government agency*; and

[(15)] *(14)* "through-harden" means heating above the transformation temperature followed by quenching and tempering *for the purpose of achieving a uniform hardness*.

[SEC. 4. SPECIAL RULES FOR FASTENERS.

[(a) WAIVER REQUIREMENT.—If the Secretary determines that any category of fastener is not used in critical applications, the Secretary shall waive the requirements of this Act with respect to such category.

[(b) ADDITIONAL ITEMS.—If the Secretary determines that—

[(1) a category of screw, nut, bolt, or stud which is not described in section 3(5)(A)(i) or (B),

[(2) a category of item which is associated with a fastener described in section 3(5)(A), (B), or (C), or

[(3) a category of item which serves a function comparable to that served by a fastener so described

is used in critical applications, the Secretary may include such category under section 3(5)(D) and therefore within the definition of fasteners under this Act.

[(c) NOTICE AND OPPORTUNITY FOR COMMENTS.—The Secretary shall provide advance notice and the opportunity for public comments prior to making any determination under subsections (a) and (b) and shall act through the Director in making any such determination.]

SEC. 5. TESTING AND CERTIFICATION OF FASTENERS.

(a) REQUIREMENT.—(1) No fastener shall be offered for sale or sold in commerce unless it is part of a lot which—

(A) conforms to the standards and specifications to which the manufacturer represents it has been manufactured; and

(B) has been inspected, tested, and certified as provided in [subsections (b) and (c)] *subsections (b), (c), and (d)* of this section.

(2)(A) Paragraph (1)(B) of this subsection shall not apply to fasteners which are part of a lot of 50 fasteners or less if, within 10 working days after the delivery of such fasteners, or as soon as practicable thereafter—

(i) inspection, testing, and certification as provided in [subsections (b) and (c)] *subsections (b), (c), and (d)* is carried out; and

* * * * * * *

(c) LABORATORY REPORT OF TESTING.—If a laboratory performing the inspection and testing under subsection (b)(1) determines, as to the characteristics selected under the sampling procedures prescribed by the Secretary and based on the sample examined, that a lot conforms to the standards and specifications to which the manufacturer represents it has been manufactured, the laboratory shall provide to the manufacturer a written inspection and testing report with respect to such lot. The report, which shall be in a form prescribed by the Secretary by regulation, shall—

(1) state the manufacturer's name, the part description, and the lot number and note the grade identification mark and insignia found on the fastener;

(2) reference the standards and specifications disclosed by the manufacturer with respect to such lot under subsection (b)(1) [or, where applicable, certified by the manufacturer under section 7(c)(1)];

(3) list the markings and characteristics selected under the Secretary's procedures for testing[, such as the chemical, dimensional, physical, mechanical, and any other] significant characteristics required by the standards and specifications described in paragraph (2) and specify the results of the inspection and testing under subsection (b)(1);

(4) *except as provided in subsection (d),* state whether, based on the samples provided as representative of the lot,

such lot has been found after such inspection and testing to conform to such standards and specifications; and

(5) bear the original signature of a laboratory employee or officer determined by the Secretary to be responsible for the accuracy of the report and of the inspection and testing to which it relates.

(d) ALTERNATIVE PROCEDURE FOR CHEMICAL CHARACTERISTICS.—Notwithstanding the requirements of subsections (b) and (c), a manufacturer shall be deemed to have demonstrated, for purposes of subsection (a)(1), that the chemical characteristics of a lot conform to the standards and specifications to which the manufacturer represents such lot has been manufactured if the following requirements are met:

(1) The coil or heat number of metal from which such lot was fabricated has been inspected and tested with respect to its chemical characteristics by a laboratory accredited in accordance with the procedures and conditions specified by the Secretary under section 6.

(2) Such laboratory has provided to the manufacturer, either directly or through the metal manufacturer, a written inspection and testing report, which shall be in a form prescribed by the Secretary by regulation, listing the chemical characteristics of such coil or heat number.

(3) The report described in paragraph (2) indicates that the chemical characteristics of such coil or heat number conform to those required by the standards and specifications to which the manufacturer represents such lot has been manufactured.

(4) The manufacturer demonstrates that such lot has been fabricated from the coil or heat number of metal to which the report described in paragraphs (2) and (3) relates.

In prescribing the form of report required by subsection (c), the Secretary shall provide for an alternative to the statement required by subsection (c)(4), insofar as such statement pertains to chemical characteristics, for cases in which a manufacturer elects to use the procedure permitted by this subsection.

SEC. 6. LABORATORY ACCREDITATION.

(a) ESTABLISHMENT OF ACCREDITATION PROGRAM.—(1) [Within 180 days after the date of enactment of this Act, the] *The* Secretary, acting through the Director, shall issue regulations which shall include—

(A) * * *

* * * * * * *

SEC. 7. SALE OF FASTENERS SUBSEQUENT TO MANUFACTURE.

[(a) DOMESTICALLY PRODUCED FASTENERS.—It shall be unlawful for a manufacturer to sell any shipment of fasteners (except fasteners for which the Secretary has waived the requirements of this Act pursuant to section 4) which are manufactured in the United States unless the fasteners are accompanied, at the time of delivery, by a written certificate by the manufacturer certifying that—

[(1) the fasteners have been manufactured according to the requirements of the applicable standards and specifications and have been inspected and tested by a laboratory accredited

in accordance with the procedures and conditions specified by the Secretary under section 6; and

[(2) an original laboratory testing report described in section 5(c) is on file with the manufacturer, or under such custody as may be prescribed by the Secretary, and available for inspection.]

(a) DOMESTICALLY PRODUCED FASTENERS.—It shall be unlawful for a manufacturer to sell any shipment of fasteners covered by this Act which are manufactured in the United States unless the fasteners—

(1) have been manufactured according to the requirements of the applicable standards and specifications and have been inspected and tested by a laboratory accredited in accordance with the procedures and conditions specified by the Secretary under section 6; and

(2) an original laboratory testing report described in section 5(c) and a manufacturer's certificate of conformance are on file with the manufacturer, or under such custody as may be prescribed by the Secretary, and available for inspection.

* * * * * * *

(c) OPTION FOR IMPORTERS AND PRIVATE LABEL DISTRIBUTORS.—(1) * * *

(2) If the importer or private distributor assumes the responsibility in writing for the inspection and testing of such lot or portion, the provisions of section 5(a) and subsections (a) and (b) of this section shall apply to the importer or private label distributor in the same manner and *to the same* extent as to a manufacturer; except that the importer or private label distributor shall provide to the testing laboratory the manufacturer's certificate described under paragraph (1) of this subsection.

(d) ALTERATIONS SUBSEQUENT TO MANUFACTURE.—(1) Any person who significantly alters a fastener so that such fastener no longer conforms to the description in the relevant [certificate] *test report* issued under section 5(c), and who thereafter offers for sale or sells such altered fastener, shall be treated as a manufacturer for purposes of this Act and shall cause such altered fastener to be inspected and tested under section 5 or this section as though it were newly manufactured, unless delivery of such fastener to the purchaser is accompanied by a written statement noting the original lot number, disclosing the subsequent alteration, and warning that such alteration may affect the dimensional or physical characteristics of the fastener.

(2) Any person who knowingly sells an altered fastener and who did not alter such fastener shall provide to the purchaser a copy of the statement required by paragraph (1).

[(e) COMMINGLING.—(1) Subject to paragraph (2), it shall be unlawful for any manufacturer or any person who purchases any quantity of fasteners for resale at wholesale to commingle like fasteners from different lots in the same container; except that such manufacturer or such person may commingle like fasteners of the same type, grade, and dimension from not more than two tested and certified lots in the same container during repackaging and plating operations: *Provided,* That any container which contains

like fasteners from two lots shall be conspicuously marked with the lot identification numbers of both lots.

[(2) Paragraph (1) does not apply to sales by original equipment manufacturers to their authorized dealers for use in assembling or servicing products produced by the original equipment manufacturers.

[(f) SUBSEQUENT PURCHASER.—(1) It shall be unlawful for any person to sell fasteners, of any quantity, to any person who purchases such fasteners—

[(A) for sale at wholesale, or

[(B) for assembling components of a product or structure for sale,

unless the container of fasteners sold is conspicously marked with the number of the lot from which such fasteners were taken, except that this requirement shall not apply to sales by original equipment manufacturers to their authorized dealers for use in assembling or servicing products produced by the original equipment manufacturer.

[(2) If a person who purchases fasteners for purposes other than those described in paragraph (1) (A) and (B) so requests either prior to the sale or at the time of sale, the seller shall conspicuously mark the container of fasteners with the lot number from which such fasteners were taken.

[(g) REGULATIONS.—The Secretary may issue such regulations as may be necessary to ensure compliance with the provisions of this section.]

(e) COMMINGLING.—It shall be unlawful for any manufacturer, importer, or private label distributor to commingle like fasteners from different lots in the same container, except that such manufacturer, importer, or private label distributor may commingle like fasteners of the same type, grade, and dimension from not more than two tested and certified lots in the same container during repackaging and plating operations. Any container which contains fasteners from two lots shall be conspicuously marked with the lot identification numbers of both lots.

(f) SUBSEQUENT PURCHASER.—If a person who purchases fasteners for any purpose so requests either prior to the sale or at the time of sale, the seller shall conspicuously mark the container of the fasteners with the lot number from which such fasteners were taken.

* * * * * * *

SEC. 9. REMEDIES AND PENALTIES.

(a) * * *

* * * * * * *

(d) ENFORCEMENT.—The Secretary may designate officers or employees of the Department of Commerce to conduct investigations pursuant to this Act. In conducting such investigations, those officers or employees may, to the extent necessary or appropriate to the enforcement of this Act, exercise such authorities as are conferred upon them by other laws of the United States, subject to policies and procedures approved by the Attorney General.

SEC. 10. RECORDKEEPING REQUIREMENTS.

(a) LABORATORIES.—Laboratories which perform inspections and testing under section 5(b) shall retain for [10 years] *5 years* all records concerning the inspection and testing, and certification, of fasteners under section 5.

(b) MANUFACTURERS, IMPORTERS, PRIVATE LABEL DISTRIBUTORS, AND PERSONS WHO MAKE SIGNIFICANT ALTERATIONS.—Manufacturers, importers, private label distributors, and persons who make significant alterations shall retain for [10 years] *5 years* all records concerning the inspection and testing, and certification, of fasteners under section 5, and shall provide copies of any applicable laboratory testing report or manufacturer's certificate upon request to [any subsequent] *the subsequent* purchaser of fasteners taken from the lot to which such testing report or manufacturer's certificate relates.

* * * * * * *

SEC. 13. REGULATIONS.

The Secretary shall [within 180 days after the date of enactment of this Act] issue such regulations as may be necessary to implement this Act.

[SEC. 14. ADVISORY COMMITTEE.

[Within 90 days after the date of enactment of this Act, the Secretary shall appoint an advisory committee consisting of representatives of fastener manufacturers, importers, distributors, end-users, independent laboratories, and standards organizations. The Secretary and Director shall consult with the advisory committee—

[(1) prior to promulgating any regulations under this Act; and

[(2) in such other matters related to fasteners as the Secretary may determine.]

* * * * * * *

XV. COMMITTEE RECOMMENDATIONS

On October 25, 1995, a quorum being present, the Committee on Science favorably reported by voice vote H.R. 2196, the National Technology Transfer and Advancement Act of 1995, as amended, to the House of Representatives and recommends its enactment.

XVI. REPORTS TO CONGRESS

Upon the enactment of this Act, the National Institute of Standards and Technology (NIST) shall, by January 1, 1996, transmit to the Congress a plan for implementing Section 12 of the amendment regarding standards and conformity assessment.

XVII. EXCHANGES OF COMMITTEE CORRESPONDENCE

HOUSE OF REPRESENTATIVES,
COMMITTEE ON COMMERCE,
Washington, DC, November 30, 1995.

Hon. ROBERT S. WALKER,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN:

On October 25, 1995, the Committee on Science ordered reported H.R. 2196, the National Technology Transfer and Advancement Act of 1995. As ordered reported by the Science Committee, H.R. 2196 contains several provisions that implicate the jurisdiction of the Commerce Committee, namely, amendments to the Fastener Quality Act.

As you know, the Commerce Committee has had a longstanding jurisdictional interest in the issue of fastener quality and the Fastener Quality Act. In the 100th Congress, the Committee undertook an investigation of counterfeit and substandard fasteners. This investigation resulted in the issuance of a unanimously approved Subcommittee report entitled "The Threat from Substandard Fasteners: Is America Losing Its Grip."

In the 101st Congress, Congressman Dingell and Congressman Roe each introduced separate bills on fastener quality. Congressman Dingell and Congressman Roe drafted a composite bill, H.R. 3000, which was reported by both the Commerce Committee and the Science Committee and ultimately became the Fastener Quality Act of 1990.

It is my understanding that the amendments to the Fastener Quality Act proposed in H.R. 2196 are based on the recommendations of the industry-government Fastener Public Law Task Force. These amendments primarily address three issues: heat mill certification; commingling; and minor nonconformance. The provisions of H.R. 2196 that amend the Fastener Quality Act clearly fall within the jurisdiction of the Commerce Committee.

Additionally, I acknowledge the jurisdiction of the Committee on Science over the provisions in H.R. 2196 that seek to promote corporate cooperation in research and development at Federal laboratories. A related but distinct issue, the commercialization of technologies developed by federally funded laboratories, has been the subject of longstanding discourse between the Committee on Commerce and the Committee on Science. I look forward to obtaining a better understanding of the history of this discourse and reserve my right to revisit the issue following consideration of this legislation by the full House.

I recognize your desire to bring this legislation before the House in an expeditious manner. Therefore, I will not seek a sequential referral of the bill. By agreeing not to seek a sequential referral, the Commerce Committee does not waive its jurisdictional claims. In addition, the Commerce Committee reserves its authority to seek equal conferees on these and any other provisions of the bill that are within the Commerce Committee's jurisdiction during any House-Senate conference that may be convened on this legislation. I would seek your commitment to support any such request.

I would appreciate your including this letter as a part of the Committee's report on H.R. 2196 and as part of the record during consideration of this bill by the House.

Thank you for your cooperation on this matter.

Sincerely,

THOMAS J. BLILEY, JR., *Chairman.*

cc:

Hon. George E. Brown, Jr.,
Ranking Minority Member,
Committee on Science

Hon. John D. Dingell,
Ranking Minority Member,
Committee on Commerce

Mr. Charles W. Johnson, III,
Parliamentarian

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC, December 1, 1995.

Hon. THOMAS J. BLILEY, JR.,
Chairman, Committee on Commerce,
House of Representatives, Washington, DC.

DEAR TOM:

I am in receipt of your letter dated November 30, 1995, regarding amendments to H.R. 2196, the National Technology Transfer and Advancement Act of 1995, which was ordered reported by the Committee on Science on October 25, 1995.

I agree that the provisions to the Fastener Quality Act, which have been incorporated into H.R. 2196, fall within the jurisdiction of the Commerce Committee, and I thank you for your agreement not to seek sequential referral of this bill. You have my commitment that I will support any request by your Committee for equal conferees on amendments to the Fastener Quality Act or other provisions of the legislation which fall within the Commerce Committee's jurisdiction should a House-Senate conference be convened on this legislation.

Your letter, and this response, will be included as part of the Committee's report on H.R. 2196 and will be part of the record during consideration of this bill by the full House.

Thank you for your assistance in expediting consideration of this important legislation.

Cordially,

ROBERT S. WALKER, *Chairman.*

cc:

Hon. George E. Brown, Jr.
Hon. John D. Dingell
Mr. Charles W. Johnson, III, Parliamentarian

XVIII. ADDITIONAL VIEWS

This Committee has tended to speak with one voice on technology transfer matters for two decades, and I hope that this tradition can continue. H.R. 2196, the National Technology Transfer and Advancement Act, as introduced, clearly follows in the tradition of the Bayh-Dole and Stevenson-Wydler Acts, and Committee Democrats view positively many of the changes made since introduction. These amendments were carefully refined over a period of two Congresses in a fully open manner, soliciting and considering the views of all concerned. This part of the bill is a work product of which every member can be proud.

Unfortunately, the Fastener Quality Act Amendments which have been added to this bill have not been handled in the same manner. This is unfortunate particularly because these amendments are critical to protecting public safety. Three Congresses ago, this Committee and the Committee on Energy and Commerce wrote the original Fastener Quality Act to answer the very real threats that counterfeit imported fasteners were posing to our defense preparedness, NASA programs, industrial worker safety, and transportation safety. Counterfeit fasteners, largely from Taiwan and other East Asian countries, were being passed off as high strength bolts, nuts, and wheel studs. When these substandard fasteners inevitably failed, accidents occurred. Investigations and indictments followed, as did extensive Congressional legislative hearings. These led to passage of a relatively tough and bipartisanly-supported Fastener Quality Act.

Since then, experience in implementing the new law has led to a general recognition that certain parts of the legislation impose unnecessary burdens on industry. I would have hoped that these needed amendments to the Fastener Quality Act would have been developed with the same degree of care as the original act. However, this year's consideration of Fastener Quality Act amendments has been marked by shortcuts for which we have paid the price. There have been no public hearings on the bill and no opportunity for Members of the committee to become informed about the issues involved in these amendments. Instead, when Department of Commerce authorization legislation was considered in late Spring, the majority proposed a version of these amendments which was portrayed to be substantially the same as a series of fastener amendments which had been considered last Congress. There turned out to be substantial differences between the two versions. Later, on just 24 hours notice, we were asked to amend the Committee-passed version of these amendments on the floor because, as drafted, the bill's enforcement provisions had been omitted. When the provisions came back before the Committee on Science as part of this legislation, our committee agreed to change one of the amendment's key definitions after receiving panic calls from various standards and engineering groups. Then, just before full committee consideration, we learned of a 17 page position paper from a domestic fastener industry group that questioned many of the other changes which were added this year. After the bill was reported, the top fastener official in the National Institute of Standards and Technology admitted that one of this paper's criticisms was true;

the amendments had inadvertently omitted many altered fasteners from coverage.

The history of this bill amply illustrates the perils of rushing through complicated legislation without the benefit of hearings and public comment. While I do not disagree with the bill's intent, I cannot help but remain concerned that there may be additional problems lurking in this bill which we have not been able to catch in this truncated process. I can only hope that we have not inadvertently reopened the floodgates for phony fasteners and a renewed threat to public safety.

GEORGE E. BROWN, JR.

XIX. PROCEEDINGS FROM SUBCOMMITTEE MARKUP

SUBCOMMITTEE MARKUP ON H.R. 2196—THE TECHNOLOGY TRANSFER IMPROVEMENTS ACT OF 1995

WEDNESDAY, OCTOBER 18, 1995

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
SUBCOMMITTEE ON TECHNOLOGY,
Washington, D. C.

The Subcommittee met at 1:10 p.m. in Room 2318 of the Rayburn House Office Building, the Honorable Constance A. Morella, Chairwoman of the Subcommittee, presiding.

Mrs. MORELLA. This afternoon the Technology Subcommittee will be marking up H.R. 2196, the Technology Transfer Improvements Act of 1995, a bill which I have introduced, co-sponsored by Chairman Walker, Committee Ranking Minority Member Congressman Brown, and our Subcommittee Ranking Member Congressman Tanner.

[The bill follows:]

104TH CONGRESS
1ST SESSION

H. R. 2196

To amend the Stevenson-Wydler Technology Innovation Act of 1980 with respect to inventions made under cooperative research and development agreements, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

AUGUST 4, 1995

Mrs. MORELLA (for herself, Mr. WALKER, Mr. BROWN of California, and Mr. TANNER) introduced the following bill; which was referred to the Committee on Science

---

A BILL

To amend the Stevenson-Wydler Technology Innovation Act of 1980 with respect to inventions made under cooperative research and development agreements, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Technology Transfer Improvements Act of 1995".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Bringing technology and industrial innovation to the marketplace is central to the economic, environmental, and social well-being of the people of the United States.

(2) The Federal Government can help United States business to speed the development of new products and processes by entering into cooperative research and development agreements which make available the assistance of Federal laboratories to the private sector, but the commercialization of technology and industrial innovation in the United States depends upon actions by business.

(3) The commercialization of technology and industrial innovation in the United States will be enhanced if companies, in return for reasonable compensation to the Federal Government, can more easily obtain exclusive licenses to inventions which develop as a result of cooperative research with scientists employed by Federal laboratories.

SEC. 3. USE OF FEDERAL TECHNOLOGY.

Subparagraph (B) of section 11(e)(7) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(e)(7)(B)) is amended to read as follows:

"(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if the

amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000.".

SEC. 4. TITLE TO INTELLECTUAL PROPERTY ARISING FROM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

Subsection (b) of section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(b)) is amended to read as follows:

"(b) ENUMERATED AUTHORITY.—(1) Under an agreement entered into pursuant to subsection (a)(1), the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under the agreement, for reasonable compensation when appropriate. The laboratory shall ensure that the collaborating party has the option to choose an exclusive license for a field of use for any such invention under the agreement or, if there is more than one collaborating party, that the collaborating parties are offered the option to hold licensing rights that collectively encompass the rights that would be held under such an exclusive license by one party. In consideration for the Government's contribution under the agreement, grants under this paragraph shall be subject to the following explicit conditions:

"(A) A nonexclusive, nontransferable, irrevocable, paid-up license from the collaborating party to the laboratory to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of section 552(b)(4) of title 5, United States Code, or which would be considered as such if it had been obtained from a non-Federal party.

"(B) If a laboratory assigns title or grants an exclusive license to such an invention, the Government shall retain the right—

"(i) to require the collaborating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in the applicant's licensed field of use, on terms that are reasonable under the circumstances; or

"(ii) if the collaborating party fails to grant such a license, to grant the license itself.

"(C) The Government may exercise its right retained under subparagraphs (B) (ii) and (iii) only if the Government finds that—

"(i) the action is necessary to meet health or safety needs that are not reasonable satisfied by the collaborating party;

"(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the collaborating party; or

"(iii) the collaborating party has failed to comply with an agreement containing provisions described in subsection (c)(4)(B).

"(2) Under agreements entered into pursuant to subsection (a)(1), the laboratory shall ensure that a collaborating party may retain title to any invention made solely by its employee in exchange for normally granting the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government for research or other Government purposes.

"(3) Under an agreement entered into pursuant to subsection (a)(1), a laboratory may—

"(A) accept, retain, and use funds, personnel, services, and property from a collaborating party and provide personnel, services, and property to a collaborating party;

"(B) use funds received from a collaborating party in accordance with subparagraph (A) to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency; and

"(C) to the extent consistent with any applicable agency requirements or standards of conduct, permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government.

"(4) A collaborating party in an exclusive license in any invention made under an agreement entered into pursuant to subsection (a)(1) shall have the right of enforcement under chapter 29 of title 35, United States Code.

"(5) A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement pursuant to subsection (a)(1) may use or obligate royalties or other income accruing to the laboratory under such agreement with respect to any invention only—

"(A) for payments to inventors;

"(B) for a purposes described in clauses (i), (iii), and (iv) of section 14(a)(1)(B); and

"(C) for scientific research and development consistent with the research and development missions and objectives of the laboratory.".

SEC. 5. DISTRIBUTION OF INCOME FROM INTELLECTUAL PROPERTY RECEIVED BY FEDERAL LABORATORIES.

Section 14 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710c) is amended—

(1) by amending subsection (a)(1) to read as follows:

"(1) Except as provided in paragraphs (2) and (4), any royalties or other payments received by a Federal agency from the licensing and assignment of inventions under agreements entered into by Federal laboratories under section 12, and from the licensing of inventions of Federal laboratories under section 207 of title 35, United States Code, or under any other provision of law, shall be retained by the agency whose laboratory produced the invention and shall be disposed of as follows:

"(A)(i) The head of the agency or laboratory, or such individual's designee, shall pay each year the first $2,000, and thereafter at least 15 percent, of the royalties or other payments to the inventor or coinventors.

"(ii) An agency or laboratory may provide appropriate incentives, from royalties, or other payments, to employees of a laboratory who contribute substantially to the technical development of licensed or assigned inventions between the time that the intellectual property rights to such inventions are legally asserted and the time of the licensing or assigning of the inventions.

"(iii) The agency or laboratory shall retain the royalties and other payments received from an invention until the agency or laboratory makes payments to employees of a laboratory under clause (i) or (ii).

"(B) The balance of the royalties or other payments shall be transferred by the agency to its laboratories, with the majority share of the royalties or other payments from any invention going to the laboratory where the invention occurred. The royalties or other payments so transferred to any laboratory may be used or obligated by that laboratory during the fiscal year in which they are received or during the succeeding fiscal year—

"(i) to reward scientific, engineering, and technical employees of the laboratory, including developers of sensitive or classified technology, regardless of whether the technology has commercial applications;

"(ii) to further scientific exchange among the laboratories of the agency;

"(iii) for education and training of employees consistent with the research and development missions and objectives of the agency or laboratory, and for other activities that increase the potential for transfer of the technology of the laboratories of the agency;

"(iv) for payment of expenses incidental to the administration and licensing of intellectual property by the agency or laboratory with respect to inventions made at that laboratory, including the fees or other costs for the services of other agencies, persons, or organizations for intellectual property management and licensing services; or

"(v) for scientific research and development consistent with the research and

development missions and objectives of the laboratory.

"(C) All royalties or other payments retained by the agency or laboratory after payments have been made pursuant to subparagraphs (A) and (B) that is unobligated and unexpended at the end of the second fiscal year succeeding the fiscal year in which the royalties and other payments were received shall be paid into the Treasury.";

(2) in subsection (a)(2)—

(A) by inserting "or other payments" after "royalties"; and

(B) by striking "for the purposes described in clauses (i) through (iv) of paragraph (1)(B) during that fiscal year or the succeeding fiscal year" and inserting in lieu thereof "under paragraph (1)(B)";

(3) in subsection (a)(3), by striking "$100,000" both places it appears and inserting "$150,000";

(4) in subsection (a)(4)—

(A) by striking "income" each place it appears and inserting in lieu thereof "payments";

(B) by striking "the payment of royalties to inventors" in the first sentence thereof and

inserting in lieu thereof "payments to inventors";

(C) by striking "clause (i) of paragraph (1)(B)" and inserting in lieu thereof "clause (iv) of paragraph (1)(B)";

(D) by striking "payment of the royalties," in the second sentence thereof and inserting in lieu thereof "offsetting the payments to inventors,"; and

(E) by striking "clauses (i) through (iv) of"; and

(5) by amending paragraph (1) of subsection (b) to read as follows:

"(1) by a contractor, grantee, or participant, or an employee of a contractor, grantee, or participant, in an agreement or other arrangement with the agency, or".

SEC. 6. EMPLOYEE ACTIVITIES.

Section 15(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710d(a)) is amended—

(1) by striking "the right of ownership to an invention under this Act" and inserting in lieu thereof "ownership of or the right of ownership to an invention made by a Federal employee"; and

(2) by inserting "obtain or" after "the Government, to".

SEC. 7. AMENDMENT TO BAYH-DOLE ACT.

Section 210(e) of title 35, United States Code, is amended by striking ", as amended by the Federal Technology Transfer Act of 1986,".

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Mrs. MORELLA. As we proceed with debate on this measure, I am going to be offering an amendment in the nature of a substitute renaming H.R. 2196 as the "National Technology Transfer and Advancement Act of 1995."

My amendment incorporates the original base text of the Technology Transfer Improvements Act, adds certain provisions affecting the National Institute of Standards and Technology, which was passed by the House in H.R. 2405, the House-passed Omnibus Civilian Science Authorization Act of 1995.

These added provisions are very important to NIST for its administration and management of scientific research and standards measurement, as we have heard in testimony before this subcommittee.

These provisions include language for NIST expanding its ability to continue hiring the "best and brightest" scientists by permanently extending the NIST Personnel Demonstration Program and increasing the cap on the NIST Postdoctoral Fellows Program. Other changes include:

Providing authority to give excess scientific equipment to secondary schools; Expansion of membership of the NIST Visiting Committee; and Creating authority for a NIST Metro Shuttle for employees, among others.

H.R. 2196 is the product of an effort of many years to improve and enhance development of Cooperative Research and Development Agreements, CRADAs, undertaken by myself and Senator Rockefeller from West Virginia.

This legislation will help facilitate and speed technology cooperation between companies and our Nation's Federal laboratories, and thus will benefit our economy and our citizens.

It does so by giving companies and Federal laboratories clear guidelines regarding intellectual property rights to technology that is developed under cooperative research projects—guidelines that will reduce negotiating time and alleviate the uncertainty that can deter companies from working with the Government.

Currently the law provides little guidance on intellectual property rights that a collaborating partner should receive from a CRADA.

The current law gives agencies very broad discretion on this matter, which provides flexibility, but also means that both companies and laboratory executives must laboriously negotiate patent rights each time they discuss a new CRADA.

Neither side has much guidance as to what constitutes an appropriate agreement regarding intellectual property developed under a CRADA.

Options range from assigning full patent title to the company to providing the firm with only a non-exclusive license for a narrow field of use.

We certainly have learned from industry executives that this uncertainty, as well as the time and the effort involved in negotiating intellectual property in each CRADA was often a barrier to working with the Federal laboratories.

We also learned that companies reluctant to enter into a CRADA are equally important to commit additional resources to commer-

cialize a CRADA invention unless they have some assurance they will control important intellectual property rights.

So the purpose of the Technology Transfer Improvements Act is to provide those assurances to United States Industry that they will be granted sufficient rights to justify prompt commercialization of resulting inventions arising from CRADAs with Federal laboratories.

The bill would also provide important new incentives to Federal laboratory personnel who create new inventions. In this way, a CRADA would be made more attractive to both American industry and Federal laboratories.

The bill is important because it comes at a time when both Federal labs and industry need to work closer together for their mutual benefit and for our national competitiveness.

So the bill enhances commercialization of technology and industrial innovation in the United States by guaranteeing to a collaborating partner from industry, in a CRADA, the option to choose an exclusive license for a field of use.

The collaborating party would have the right to use the technology in exchange for reasonable compensation to the laboratory.

In addition, the bill provides that the Federal Government will retain minimum statutory rights to use the technology for its own purposes. If the title holder does not commercialize the technology in any field of use, or it is not manufactured in the United States, or if there is a public necessity to the technology, the Government may exercise its "march-in rights" provided in the bill.

The bill would also seek to encourage greater cooperation between Federal labs and U.S. industry by enhancing the financial incentives and the awards given to Federal laboratory scientists for technology that results in marketable products.

These incentives are paid from the income the laboratories receive for commercialized technology and not from tax dollars.

The hearing record is clear on the need for this bill. On June 27th, this Subcommittee and the Basic Research Subcommittee held a joint hearing on technology transfer and our Federal laboratories with a focus on this Technology Transfer Improvements Act.

The witnesses at the hearing testified very favorably in support of the bill. The testimony from the hearing supplemented the hearing record on the bill that already had been established in the 103rd Congress.

In the previous Congress, hearings in the House and Senate were held on the previous version of the bill, H.R. 3590 and S. 1537. The bills received strong support from the Administration and a series of Federal agency officials, as well as a broad spectrum of academicians and industry association representatives.

These hearings have helped to spark a very beneficial debate on the current role of our Federal laboratories in our Nation's global competitiveness, a topic which we will continue to explore in this Congress.

H.R. 2196 is an important step in the right direction, and I welcome the input of all those who have an interest in the bill as this Subcommittee examines additional measures to enhance our international competitiveness.

I want to thank all my distinguished colleagues for their co-sponsorship of H.R. 2196 and I look forward to working with them to expedite enactment of this necessary legislation. I urge my colleagues to support it.

My lengthy opening statement was so that you would get a feeling of what the bill does and its background.

I would now like to yield to the Ranking Minority Member of the Subcommittee, Mr. Tanner.

Mr. TANNER. Thank you, Madam Chairman. I want to thank Ms. Johnson and Mr. McHale and others who were here this morning. I was in another committee with regard to the Bosnian situation and I am sorry I couldn't be here, but I appreciate their efforts.

Mrs. MORELLA. Did you solve the situation?

Mr. TANNER. No. I wish it was that simple. Thank you, very much. I also am a strong advocate of public-private partnerships to promote American competitiveness. I want to thank Chairwoman Morella for asking me to be an original co-sponsor of H.R. 2196, the Technology Transfer Improvements Act of 1995.

It is a step in the right direction, and we ought to do our best to assure that government investment in our Federal labs provides the maximum return on the taxpayers' investment.

This bill reaffirms the Chairlady's and my support for promoting these government-industry partnerships, although unfortunately I think we have our work cut out for us in convincing some of our colleagues on this committee of the benefits of these partnerships. The Full Committee has sent very mixed signals about its position on this issue.

Today we are marking up a bill to promote technology transfer in cooperation between the Federal labs and industry. Yet, only last week the House-passed Omnibus Science Bill eliminated funding for Cooperative Research and Development Agreements, CRADAs, at the Department of Energy saying that CRADAs were nothing more than another form of corporate welfare. It is obvious that this is an unresolved issue in the 104th Congress.

Again I want to thank the Chairwoman of this Subcommittee for her efforts in this regard, and only hope that we can work together to convince others, who have something to do with the work of this Full Committee, of the merit of our position.

There is a conflict on some of our members. Ms. Lofgren is in another markup in another committee now. Therefore, I would like to suggest that we dispense with this matter quickly.

I reserve the right, if I may, for Subcommittee members to offer amendments at the Full Committee markup next week. I understand that the Chairwoman is amenable to that and may have an amendment or two of her own.

Mrs. MORELLA. Yes.

Mr. TANNER. Thank you.

Mrs. MORELLA. Hearing no objection, I so move that that can be the case, they can be offered.

[No response.]

Mrs. MORELLA. I would like to ask, unless anyone has any opening statements they would like to make?

[No response.]

Mrs. MORELLA. I know everybody has got many meetings that they are currently in the middle of or going to attend. Then I would like to ask unanimous consent that the amendment in the nature of a substitute entitled "The National Technology Transfer and Advancement Act of 1995", which was prepared by legislative counsel and previously distributed to the Members, be considered as read and open for amendment at any point.

[The amendment follows:]

AMENDMENT IN THE NATURE OF A SUBSTITUTE TO H.R. 2196 OFFERED BY MRS. MORELLA

Strike all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Technology Transfer and Advancement Act of 1995".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Bringing technology and industrial innovation to the marketplace is central to the economic, environmental, and social well-being of the people of the United States.

(2) The Federal Government can help United States business to speed the development of new products and processes by entering into cooperative research and development agreements which make available the assistance of Federal laboratories to the private sector, but the commercialization of technology and industrial innovation in the United States depends upon actions by business.

(3) The commercialization of technology and industrial innovation in the United States will be en-

hanced if companies, in return for reasonable compensation to the Federal Government, can more easily obtain exclusive licenses to inventions which develop as a result of cooperative research with scientists employed by Federal laboratories.

SEC. 3. USE OF FEDERAL TECHNOLOGY.

Subparagraph (B) of section 11(e)(7) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(e)(7)(B)) is amended to read as follows:

"(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if the amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000.".

SEC. 4. TITLE TO INTELLECTUAL PROPERTY ARISING FROM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

Subsection (b) of section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(b)) is amended to read as follows:

"(b) ENUMERATED AUTHORITY.—(1) Under an agreement entered into pursuant to subsection (a)(1), the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under the agreement, for reason-

able compensation when appropriate. The laboratory shall ensure that the collaborating party has the option to choose an exclusive license for a field of use for any such invention under the agreement or, if there is more than one collaborating party, that the collaborating parties are offered the option to hold licensing rights that collectively encompass the rights that would be held under such an exclusive license by one party. In consideration for the Government's contribution under the agreement, grants under this paragraph shall be subject to the following explicit conditions:

"(A) A nonexclusive, nontransferable, irrevocable, paid-up license from the collaborating party to the laboratory to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of section 552(b)(4) of title 5, United States Code, or which would be considered as such if it had been obtained from a non-Federal party.

"(B) If a laboratory assigns title or grants an exclusive license to such an invention, the Government shall retain the right—

"(i) to require the collaborating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in the applicant's licensed field of use, on terms that are reasonable under the circumstances; or

"(ii) if the collaborating party fails to grant such a license, to grant the license itself.

"(C) The Government may exercise its right retained under subparagraphs (B) (ii) and (iii) only if the Government finds that—

"(i) the action is necessary to meet health or safety needs that are not reasonable satisfied by the collaborating party;

"(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the collaborating party; or

"(iii) the collaborating party has failed to comply with an agreement containing provisions described in subsection (c)(4)(B).

"(2) Under agreements entered into pursuant to subsection (a)(1), the laboratory shall ensure that a collaborating party may retain title to any invention made solely by its employee in exchange for normally granting the

Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government for research or other Government purposes.

"(3) Under an agreement entered into pursuant to subsection (a)(1), a laboratory may—

"(A) accept, retain, and use funds, personnel, services, and property from a collaborating party and provide personnel, services, and property to a collaborating party;

"(B) use funds received from a collaborating party in accordance with subparagraph (A) to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency; and

"(C) to the extent consistent with any applicable agency requirements or standards of conduct, permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government.

"(4) A collaborating party in an exclusive license in any invention made under an agreement entered into pur-

suant to subsection (a)(1) shall have the right of enforcement under chapter 29 of title 35, United States Code.

"(5) A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement pursuant to subsection (a)(1) may use or obligate royalties or other income accruing to the laboratory under such agreement with respect to any invention only—

"(A) for payments to inventors;

"(B) for a purposes described in clauses (i), (iii), and (iv) of section 14(a)(1)(B); and

"(C) for scientific research and development consistent with the research and development missions and objectives of the laboratory.".

SEC. 5. DISTRIBUTION OF INCOME FROM INTELLECTUAL PROPERTY RECEIVED BY FEDERAL LABORATORIES.

Section 14 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710c) is amended—

(1) by amending subsection (a)(1) to read as follows:

"(1) Except as provided in paragraphs (2) and (4), any royalties or other payments received by a Federal agency from the licensing and assignment of inventions under agreements entered into by Federal

laboratories under section 12, and from the licensing of inventions of Federal laboratories under section 207 of title 35, United States Code, or under any other provision of law, shall be retained by the agency whose laboratory produced the invention and shall be disposed of as follows:

"(A)(i) The head of the agency or laboratory, or such individual's designee, shall pay each year the first $2,000, and thereafter at least 15 percent, of the royalties or other payments to the inventor or coinventors.

"(ii) An agency or laboratory may provide appropriate incentives, from royalties, or other payments, to employees of a laboratory who contribute substantially to the technical development of licensed or assigned inventions between the time that the intellectual property rights to such inventions are legally asserted and the time of the licensing or assigning of the inventions.

"(iii) The agency or laboratory shall retain the royalties and other payments received from an invention until the agency or laboratory makes payments to employees of a laboratory under clause (i) or (ii).

"(B) The balance of the royalties or other payments shall be transferred by the agency to its laboratories, with the majority share of the royalties or other payments from any invention going to the laboratory where the invention occurred. The royalties or other payments so transferred to any laboratory may be used or obligated by that laboratory during the fiscal year in which they are received or during the succeeding fiscal year—

"(i) to reward scientific, engineering, and technical employees of the laboratory, including developers of sensitive or classified technology, regardless of whether the technology has commercial applications;

"(ii) to further scientific exchange among the laboratories of the agency;

"(iii) for education and training of employees consistent with the research and development missions and objectives of the agency or laboratory, and for other activities that increase the potential for transfer of the technology of the laboratories of the agency;

"(iv) for payment of expenses incidental to the administration and licensing of intellectual property by the agency or laboratory with respect to inventions made at that laboratory, including the fees or other costs for the services of other agencies, persons, or organizations for intellectual property management and licensing services; or

"(v) for scientific research and development consistent with the research and development missions and objectives of the laboratory.

"(C) All royalties or other payments retained by the agency or laboratory after payments have been made pursuant to subparagraphs (A) and (B) that is unobligated and unexpended at the end of the second fiscal year succeeding the fiscal year in which the royalties and other payments were received shall be paid into the Treasury.";

(2) in subsection (a)(2)—

(A) by inserting "or other payments" after "royalties"; and

(B) by striking "for the purposes described in clauses (i) through (iv) of paragraph (1)(B) during that fiscal year or the succeeding fiscal year" and inserting in lieu thereof "under paragraph (1)(B)";

(3) in subsection (a)(3), by striking "$100,000" both places it appears and inserting "$150,000";

(4) in subsection (a)(4)—

(A) by striking "income" each place it appears and inserting in lieu thereof "payments";

(B) by striking "the payment of royalties to inventors" in the first sentence thereof and inserting in lieu thereof "payments to inventors";

(C) by striking "clause (i) of paragraph (1)(B)" and inserting in lieu thereof "clause (iv) of paragraph (1)(B)";

(D) by striking "payment of the royalties," in the second sentence thereof and inserting in lieu thereof "offsetting the payments to inventors,"; and

(E) by striking "clauses (i) through (iv) of"; and

(5) by amending paragraph (1) of subsection (b) to read as follows:

"(1) by a contractor, grantee, or participant, or an employee of a contractor, grantee, or participant, in an agreement or other arrangement with the agency, or".

SEC. 6. EMPLOYEE ACTIVITIES.

Section 15(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710d(a)) is amended—

(1) by striking "the right of ownership to an invention under this Act" and inserting in lieu thereof "ownership of or the right of ownership to an invention made by a Federal employee"; and

(2) by inserting "obtain or" after "the Government, to".

SEC. 7. AMENDMENT TO BAYH-DOLE ACT.

Section 210(e) of title 35, United States Code, is amended by striking ", as amended by the Federal Technology Transfer Act of 1986,".

SEC. 8. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT AMENDMENTS.

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended—

(1) in section 10(a)—

(A) by striking "nine" and inserting in lieu thereof "15"; and

(B) by striking "five" and inserting in lieu thereof "10";

(2) in section 15—

(A) by striking "Pay Act of 1945; and" and inserting in lieu thereof "Pay Act of 1945;"; and

(B) by inserting "; and (h) the provision of transportation services for employees of the Institute between the facilities of the Institute and nearby public transportation, notwithstanding section 1344 of title 31, United States Code" after "interests of the Government"; and

(3) in section 19, by striking "nor more than forty" and inserting in lieu thereof "nor more than 60".

SEC. 9. RESEARCH EQUIPMENT.

Section 11(i) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(i)) is amended—

(1) by inserting "loan, lease," after "department, may"; and

(2) by inserting "Actions taken under this subsection shall not be subject to Federal requirements on the disposal of property." after "education and research activities.".

SEC. 10. PERSONNEL.

The personnel management demonstration project established under section 10 of the National Bureau of Standards Authorization Act for Fiscal Year 1987 (15 U.S.C. 275 note) is extended indefinitely.

SEC. 11. FASTENER QUALITY ACT AMENDMENTS.

(a) SECTION 2 AMENDMENTS.—Section 2 of the Fastener Quality Act (15 U.S.C. 5401) is amended—

(1) by striking subsection (a)(4), and redesignating paragraphs (5) through (9) as paragraphs (4) through (8), respectively;

(2) in subsection (a)(7), as so redesignated by paragraph (1) of this subsection, by striking "by lot number"; and

(3) in subsection (b), by striking "used in critical applications" and inserting in lieu thereof "in commerce".

(b) SECTION 3 AMENDMENTS.—Section 3 of the Fastener Quality Act (15 U.S.C. 5402) is amended—

(1) in paragraph (1)(B) by striking "having a minimum tensile strength of 150,000 pounds per square inch" and inserting in lieu thereof "having a minimum Rockwell C hardness of 40 or above";

(2) in paragraph (2)—

(A) by inserting "International Organization for Standardization," after "Society of Automotive Engineers,"; and

(B) by inserting "consensus" after "or any other";

(3) in paragraph (5)—

(A) by inserting "or" after "standard or specification," in subparagraph (B);

(B) by striking "or" at the end of subparagraph (C);

(C) by striking subparagraph (D); and

(D) by inserting "or produced in accordance with ASTM F 432" after "307 Grade A";

(4) in paragraph (6) by striking "other person" and inserting in lieu thereof "government agency";

(5) in paragraph (8) by striking "Standard" and inserting in lieu thereof "Standards";

(6) by striking paragraph (11) and redesignating paragraphs (12) through (15) as paragraphs (11) through (14), respectively;

(7) in paragraph (13), as so redesignated by paragraph (6) of this subsection, by striking ", a government agency" and all that follows through "markings of any fastener" and inserting in lieu thereof "or a government agency"; and

(8) in paragraph (14), as so redesignated by paragraph (6) of this subsection, by inserting "for the purpose of achieving a uniform hardness" after "quenching and tempering".

(c) SECTION 4 REPEAL.—Section 4 of the Fastener Quality Act (15 U.S.C. 5403) is repealed.

(d) SECTION 5 AMENDMENTS.—Section 5 of the Fastener Quality Act (15 U.S.C. 5404) is amended—

(1) in subsection (a)(1)(B) and (2)(A)(i) by striking "subsections (b) and (c)" and inserting in lieu thereof "subsections (b), (c), and (d)";

(2) in subsection (c)(2) by striking "or, where applicable" and all that follows through "section 7(c)(1)";

(3) in subsection (c)(3) by striking ", such as the chemical, dimensional, physical, mechanical, and any other";

(4) in subsection (c)(4) by inserting "except as provided in subsection (d)," before "state whether"; and

(5) by adding at the end the following new subsection:

"(d) ALTERNATIVE PROCEDURE FOR CHEMICAL CHARACTERISTICS.—Notwithstanding the requirements of subsections (b) and (c), a manufacturer shall be deemed

to have demonstrated, for purposes of subsection (a)(1), that the chemical characteristics of a lot conform to the standards and specifications to which the manufacturer represents such lot has been manufactured if the following requirements are met:

"(1) The coil or heat number of metal from which such lot was fabricated has been inspected and tested with respect to its chemical characteristics by a laboratory accredited in accordance with the procedures and conditions specified by the Secretary under section 6.

"(2) Such laboratory has provided to the manufacturer, either directly or through the metal manufacturer, a written inspection and testing report, which shall be in a form prescribed by the Secretary by regulation, listing the chemical characteristics of such coil or heat number.

"(3) The report described in paragraph (2) indicates that the chemical characteristics of such coil or heat number conform to those required by the standards and specifications to which the manufacturer represents such lot has been manufactured.

"(4) The manufacturer demonstrates that such lot has been fabricated from the coil or heat number

of metal to which the report described in paragraphs (2) and (3) relates.

In prescribing the form of report required by subsection (c), the Secretary shall provide for an alternative to the statement required by subsection (c)(4), insofar as such statement pertains to chemical characteristics, for cases in which a manufacturer elects to use the procedure permitted by this subsection.".

(e) SECTION 6 AMENDMENT.—Section 6(a)(1) of the Fastener Quality Act (15 U.S.C. 5405(a)(1)) is amended by striking "Within 180 days after the date of enactment of this Act, the" and inserting in lieu thereof "The".

(f) SECTION 7 AMENDMENTS.—Section 7 of the Fastener Quality Act (15 U.S.C. 5406) is amended—

(1) by amending subsection (a) to read as follows:

"(a) DOMESTICALLY PRODUCED FASTENERS.—It shall be unlawful for a manufacturer to sell any shipment of fasteners covered by this Act which are manufactured in the United States unless the fasteners—

"(1) have been manufactured according to the requirements of the applicable standards and specifications and have been inspected and tested by a laboratory accredited in accordance with the proce-

dures and conditions specified by the Secretary under section 6; and

"(2) an original laboratory testing report described in section 5(c) and a manufacturer's certificate of conformance are on file with the manufacturer, or under such custody as may be prescribed by the Secretary, and available for inspection,";

(2) in subsection (c)(2) by inserting "to the same" after "in the same manner and";

(3) in subsection (d)(1) by striking "certificate" and inserting in lieu thereof "test report"; and

(4) by striking subsections (e), (f), and (g) and inserting in lieu thereof the following:

"(e) COMMINGLING.—It shall be unlawful for any manufacturer, importer, or private label distributor to commingle like fasteners from different lots in the same container, except that such manufacturer, importer, or private label distributor may commingle like fasteners of the same type, grade, and dimension from not more than two tested and certified lots in the same container during repackaging and plating operations. Any container which contains fasteners from two lots shall be conspicuously marked with the lot identification numbers of both lots.

"(f) SUBSEQUENT PURCHASER.—If a person who purchases fasteners for any purpose so requests either

prior to the sale or at the time of sale, the seller shall conspicuously mark the container of the fasteners with the lot number from which such fasteners were taken.".

(g) SECTION 9 AMENDMENT.—Section 9 of the Fastener Quality Act (15 U.S.C. 5408) is amended by adding at the end the following new subsection:

"(d) ENFORCEMENT.—The Secretary may designate officers or employees of the Department of Commerce to conduct investigations pursuant to this Act. In conducting such investigations, those officers or employees may, to the extent necessary or appropriate to the enforcement of this Act, exercise such authorities as are conferred upon them by other laws of the United States, subject to policies and procedures approved by the Attorney General.".

(h) SECTION 10 AMENDMENTS.—Section 10 of the Fastener Quality Act (15 U.S.C. 5409) is amended—

(1) in subsections (a) and (b), by striking "10 years" and inserting in lieu thereof "5 years"; and

(2) in subsection (b), by striking "any subsequent" and inserting in lieu thereof "the subsequent".

(i) SECTION 13 AMENDMENT.—Section 13 of the Fastener Quality Act (15 U.S.C. 5412) is amended by striking "within 180 days after the date of enactment of this Act".

(j) SECTION 14 REPEAL.—Section 14 of the Fastener Quality Act (15 U.S.C. 5413) is repealed.

SEC. 12. STANDARDS CONFORMITY.

(a) USE OF STANDARDS.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) by striking ", including comparing standards" and all that follows through "Federal Government";

(2) by redesignating paragraphs (3) through (11) as paragraphs (4) through (12), respectively; and

(3) by inserting after paragraph (2) the following new paragraph:

"(3) to compare standards used in scientific investigations, engineering, manufacturing, commerce, industry, and educational institutions with the standards adopted or recognized by the Federal Government and to coordinate the use by Federal agencies of private sector standards, emphasizing where possible the use of standards developed by private, consensus organizations;".

(b) CONFORMITY ASSESSMENT ACTIVITIES.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) by striking "and" at the end of paragraph (11), as so redesignated by subsection (a)(2) of this section;

(2) by striking the period at the end of paragraph (12), as so redesignated by subsection (a)(2) of this section, and inserting in lieu thereof "; and"; and

(3) by adding at the end the following new paragraph:

"(13) to coordinate Federal, State, local, and private sector standards conformity assessment activities, with the goal of eliminating unnecessary duplication and complexity in the development and promulgation of conformity assessment requirements and measures.".

(c) TRANSMITTAL OF PLAN TO CONGRESS.—The National Institute of Standards and Technology shall, by January 1, 1996, transmit to the Congress a plan for implementing the amendments made by this section.

THE NATIONAL TECHNOLOGY TRANSFER AND ADVANCEMENT ACT OF 1995

Summary of the provisions in the amendment in the nature of a substitute for H.R. 2196

H.R. 2196 amends the Stevenson-Wydler Technology Innovation Act of 1980 and the Federal Technology Transfer Act of 1986. The bill seeks to provide the following objectives:

(1) To provide assurances to United States industry that sufficient rights to intellectual property resulting from collaborative agreements with federal laboratories will be granted, thereby justifying prompt commercialization of resulting discoveries;

(2) To provide important new incentives and rewards to federal laboratory personnel who create new inventions; and

(3) To provide several clarifying amendments to strengthen current technology transfer law, as well as several administrative amendments relating to the management and the advancement of scientific research and standards measurement of the National Institute of Standards and Technology.

Section 1. Short Title.

The Act may be cited as the "National Technology Transfer and Advancement Act of 1995."

Section 2. Findings.

Promoting technology and bringing industrial innovation to the marketplace is vital to our nation's future. To further this objective and to help speed the development of new technologies, United States industry may enter into cooperative research and development agreements (CRADAs) with our Federal laboratories.

The commercialization of technology and its corollary impact upon our nation's ability to compete in the global marketplace, however, ultimately depends upon actions by industry. Therefore, United States industry must be provided assurances that they will be granted sufficient rights -- such as an exclusive license for a field of use -- to justify prompt commercialization of resulting inventions arising from CRADAs.

Section 3. Use of Federal Technology.

Provides for the authority for Federal Laboratory Consortium transfer of funds.

Section 4. Title to Intellectual Property Arising from Cooperative Research and Development Agreements.

Guarantees an industrial partner to a joint Cooperative Research and Development Agreement (CRADA) the option to select either an exclusive or non-exclusive license to the resulting invention. This option provides needed flexibility so that CRADAs can proceed rapidly under the Act and technology can move into commercialization. The important factor is that industry selects which option makes the most sense under the CRADA.

Reiterates Government's right to use the invention, for its legitimate needs, but stresses the obligation to protect from public disclosure any information classified as privileged or confidential under Exemption 4 of the Freedom of Information Act. This is not an unreasonable burden on the Government, and is an important assurance to industry that their investments in the CRADA will be protected.

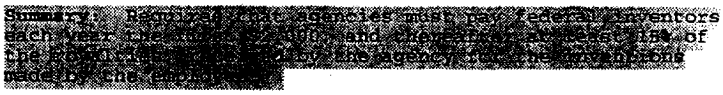
Provides when the laboratory assigns ownership or an exclusive license to the industry partner that licenses to others may be required if needed to satisfy public health, safety, regulatory, or the failure to manufacture resulting technologies in the United States. This parallels similar provisions in the Bayh-Dole Act covering universities and non-profit organizations. This assures the public that their interests in the new technologies are also being considered.

Clarifies current law defining the contributions laboratories can make in a CRADA. The words "facilities, equipment, or other resources" are substituted for the current word, "property" giving greater guidance to the agencies as to what contributions they can make to the agreement. The language does not change the current prohibition on providing federal funds to CRADAS.

Clarifies that agencies may use royalties to hire temporary personnel to assist in the CRADA or related projects. Currently many agencies face a cap on bringing on additional personnel because of federal downsizing. The current language will not affect downsizing, but allows the laboratories with sufficient royalty funds, to bring in needed temporary staff to make partnerships under the Act successful. This is accomplished without requiring additional federal funds.

Enumerates how Government-owned, contractor operated (GOCO) laboratories may use resulting royalties, followed by a separate section for Government-owned and operated (GOGO) laboratories. This provision makes these policies more consistent. Congress has been addressing this issue on a piece-meal basis in previous legislation (e.g. the Bayh-Dole Act, the Federal Technology Transfer Act of 1986, and the Technology and Transfer Competitiveness Act of 1989).

Section 5. Distribution of Income from Intellectual Property Received by Federal Laboratories.



Responds to criticism made by the General Accounting Office and witnesses in the hearing in the 103rd Congress that agencies are not sufficiently rewarding laboratory personnel. Requires that agencies must annually pay inventors at least 15% of the first $2,000 in royalties received by the agency for the inventions made by the employee.

The section also allows for rewarding other lab personnel involved in the project, permits agencies to pay for related administrative and legal costs, and provides a significant new incentive by allowing the laboratory to use royalties for related research in the laboratory. This is a very important incentive at a time of shrinking federal research and development budgets. The United States public also benefits because the laboratories can perform additional mission-related research & development without cost to the taxpayers.

Restates the current provision allowing employees, and former laboratory employees to work on the commercialization of their inventions under the Act.

Section 6. Employee Activities.

The current provisions clarify the original Congressional intent that rights to inventions should be given to employees when the agency is not pursuing them. In the event that the federal government chooses not to pursue the right of ownership to an invention, permits the federal scientist to retain title to the invention for the purposes of commercialization. Corrects confusion that has arisen in some agencies whenever the Government takes ownership of an employee's invention, that the it can not subsequently waive ownership to inventions that it does not intend to pursue.

Section 7. Amendment to Bayh-Dole Act.

Reflects technical changes made by the enactment of this Act as it affects the Bayh-Dole Act.

Section 8. National Institute of Standards and Technology Act Amendments.

This provision would expand the NIST Visiting Committee on Advanced Technology (VCAT) from nine members to fifteen members. This expansion will ensure that the VCAT's expertise can match the breadth and diversity of NIST programs. Assessments of NIST laboratory programs require a panel with broad technical expertise, since the labs have eight major operating units specializing in different fields of science and technology, and focusing on different industry sectors.

In addition to this expertise, an ideal panel would include a diverse membership representing industry, academe, and government laboratories. At its present size of nine members, all busy top-level technology experts, the VCAT is challenged to provide the broad oversight and advice needed to best inform NIST's programs.

Provides authority for NIST to provide shuttle bus service between the Shady Grove Metro station in Gaithersburg and the NIST Gaithersburg campus for employees to use to commute to work.

This authority would not require any additional funding and would, in fact, provide some cost savings for the Federal government.

Federal agencies are currently authorized to provide cash subsidies to their employees to encourage them to use mass transit. This subsidy costs approximately $65 per employee per month. NIST does not currently provide subsidies and will not provide subsidies if given the requested authority. NIST proposes to encourage the use of mass transit by allowing employees to use the existing shuttle service.

Currently, NIST provides a limited shuttle service between the NIST Gaithersburg campus and the Shady Grove station for use only by visitors and official guests, and by employees traveling into Washington, D. C. on official business. This requested authority would allow all NIST employees to use the NIST shuttle to get to and from the Shady Grove Metro station for their daily commute between work and home.

Since NIST is several miles from the Shady Grove Metro Station and because the available commercial bus transportation route from Shady Grove to NIST is circuitous and extremely time consuming, most NIST employees do not take advantage of the mass transit. However, NIST employees have indicated that they would be willing to take mass transit if convenient direct bus transportation from the Metro station were made available.

In addition, the National Capital Planning Commission and the Maryland National Park and Planning Commission are also strongly urging NIST to develop a Transportation Management Plan which would include encouraging car pooling and bicycling, as well as a plan to encourage the use of mass transportation.

Since NIST is engaged in research at the forefront of technology, it must be cognizant of state-of-the art research conducted by the leading academic institutions, and rapidly incorporate that knowledge into its research programs if the agency is to serve U.S. industry well. The Postdoctoral Fellowship Program provides NIST with an opportunity to keep abreast of the latest developments in academic research. Additionally, the Postdoctoral Fellowship Program provides a continuing infusion of the nation's outstanding scientists, mathematicians, and engineers into the NIST staff both on a temporary basis and by selective recruiting for career appointments.

The number of Postdoctoral Fellowships at NIST was last increased to 40 in Public Law 99-574, the National Bureau of Standards Authorization Act of 1987, dated October 28, 1986. An increase in the program to 60 positions would permit NIST to enhance some of its programs.

For recent doctoral graduates, the programs provide an opportunity for concentrated research in association with NIST staff, often as a climax to formal career preparation. In return, NIST laboratories receive a stimulus to their industry-oriented programs by the presence of bright, highly motivated, recent doctoral graduates with records of research productivity. New ideas, techniques, and approaches to problems contribute to the overall research climate of the laboratories.

The NIST Postdoctoral Fellowships Program provides two-year fellowship appointments for outstanding scientists and engineers chosen through a national competition administered by the National Research Council and the National Academy of Sciences.

Section 9. Research Equipment.

This amends a provision of the American Technology Preeminence Act of 1992 clarifying that excess scientific equipment can be given, loaned, or leased to public and private schools and nonprofit institutions without regard to federal property disposal laws. The original amendment in the American Technology Preeminence Act was intended to allow Federal laboratories to donate their excess scientific equipment directly to public and private primary and secondary schools. It was intended to eliminate much of the paperwork burden which seems to hinder Federal labs from donating such equipment to primary and secondary schools. The cumbersome paperwork requirements also discourage the public and private schools from attempting to obtain excess equipment. This language will further clarify the intent of the original amendment and eliminate problems with implementation.

Section 10. Personnel.

The NIST Personnel Demonstration Project has dramatically changed personnel management and administration at NIST. Feedback from managers and employees and evaluation reports from OPM contractors have shown that the project is meeting its objectives to recruit and retain quality staff, make compensation more competitive, link pay to performance, simplify position classification, streamline processing, improve the staffing

process, get new hires aboard faster, and increase the manager's role and accountability in personnel management. As a result, NIST is now competing more effectively in the labor market. New hires have been made under the system that could not have been made before. Pay-for-performance has improved NIST's ability to keep its best personnel.

The NIST Authorization Act for Fiscal Year 1987 established this NIST project to demonstrate an innovative new personnel management system with hiring, classification, compensation, and performance methods more like those of the private sector. That legislation requires NIST to work with OPM under the provisions of 5 U.S.C. 4703, which authorizes demonstration projects for a duration of 5 years but provides OPM authority to extend a project. Under this authority, OPM has extended the original completion date of the project from December 31, 1992 to September 30, 1995.

Section 11. Fastener Quality Act Amendments.

This section amends the Fastener Quality Act in Title 15 U.S.C. et seq. The Fastener Advisory Committee, created by Congress, has determined that the Act will have a detrimental impact on business. The Fastener Advisory Committee reported that without their recommended changes, the burden of costs would be close to $1 billion on the fastener industry.

These provisions addresses the concerns of the Fastener Advisory Committee regarding heat mill certification, commingling, and minor nonconformance. Working with this Congress and NIST, the Fastener Public Law Task Force recommended certain changes to the Act. The Task Force comprised of membership from manufacturing, importing, and distributing, has worked to improve the law while maintaining safety and quality. The Task Force represents 85 percent of all the companies involved in the manufacture, distribution, and importation of fasteners and their suppliers in the United States. Combined the Task Force represents over 100,000 employees in all 50 states.

Section 12. Standards Conformity.

The National Research Council in their March 1995 report entitled, "Standards, Conformity Assessment, and Trade in the 21st Century" made certain recommendations regarding the functions of NIST so they could best serve in the effort to facilitate the use of private consensual standards wherever possible.

The report recommends that Congress extend its statutory mandate to NIST to implement a Government-wide policy of phasing out Federally operated conformity assessment activities in favor of state, local, and private sector-based processes. It recommends that NIST develop a strategic plan to eliminate duplication in state and local criteria for accrediting testing laboratories and product certifiers and take the lead in efforts to build a network of mutual recognition agreements regarding conformity assessment among Federal, state, and local authorities. It also recommends that Congress grant NIST a clear statutory mandate to act as the lead U.S. agency for ensuring Federal use of standards developed by private consensus organizations to meet regulatory and procurement needs.

In addition, these provisions allow NIST to take a forward role in coordinating Federal, state, local, private sector entities to eliminate unnecessary duplication and complexity in developing and implementing conformity assessment criteria certification requirements. NIST is required to report back to Congress on their progress and the feasibility of such action by January 1, 1996.

Mrs. MORELLA. At the present time, I don't hear any amendments at the Subcommittee level. Are there any amendments that are to be considered?

[No response.]

Mrs. MORELLA. Hearing none, the question is on the amendment in the nature of a substitute. All those in favor will say aye.

[Chorus of ayes.]

Mrs. MORELLA. Opposed, say no.

[No response.]

Mrs. MORELLA. In the opinion of the Chair, the ayes have it. The question is on the bill H.R. 2196, the Technology Transfer Improvements Act of 1995, as amended. All those in favor will say aye.

[Chorus of ayes.]

Mrs. MORELLA. Those opposed will say no.

[No response.]

Mrs. MORELLA. In the opinion of the Chair the ayes have it.

Mr. TANNER. Madam Chairwoman, I move that a clean bill be prepared by the Chair for further consideration by the Committee.

Mrs. MORELLA. The Subcommittee has heard the motion. Those in favor will say aye.

[Chorus of ayes.]

Mrs. MORELLA. Those opposed will say no.

[No response.]

Mrs. MORELLA. The motion is agreed to. The bill is reported to the Full Committee. Without objection, the Motion to Reconsider is laid upon the table.

This concludes our Subcommittee markup on the measure H.R. 2196, Technology Transfer Improvements Act of 1995. I thank you all for coming.

[Whereupon, at 1:20 p.m., the markup was concluded and the Committee proceeded to further business.]

XX. PROCEEDINGS FROM FULL COMMITTEE MARKUP

FULL COMMITTEE MARKUP ON H.R. 2196—THE NATIONAL TECHNOLOGY TRANSFER AND ADVANCEMENT ACT OF 1995

WEDNESDAY, OCTOBER 25, 1995

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, D.C.

The Committee met, pursuant to notice, at 10:35 a.m. in room 2318, Rayburn House Office Building, Hon. Robert S. Walker [Chairman of the Committee] presiding.

The CHAIRMAN. Good morning. Pursuant to notice, the Committee on Science is meeting today to consider the following, H.R. 2196, the National Technology Transfer and Advancement Act of 1995, and amendments to the rules governing procedure for the Committee on Science for the 104th Congress. I ask unanimous consent for the authority to recess. Without objection.

We will now proceed to the consideration of H.R. 2196, the National Technology Transfer and Advancement Act of 1995. Let me begin by commending Chairwoman Morella and the Members of her Technology Subcommittee for favorably reporting H.R. 2196, the National Technology Transfer and Advancement Act of 1995, to the full Committee.

This Committee has a rich tradition of promoting technology transfer from our national laboratories. Beginning with the landmark Stevenson-Wydler Technology Innovation Act of 1980, through the Federal Technology Transfer Act of 1986, among other bills, the Science Committee has originated legislation which has stimulated and increased the quality of technology in the United States.

These acts have permitted the private sector to develop cooperative research and development agreements, CRADAs, with our Federal laboratories, thereby providing them with access to the expertise of the engineers, scientists and facility resources of our national labs. In a CRADA, the laboratories can contribute people, facilities, equipment and ideas, but not funding, while the private sector companies contribute people and funding.

H.R. 2196 provides guidelines that simplify the negotiation of CRADAs, addressing a major concern of private sector companies, and in the process, give companies greater assurance that they will share in the benefits of the research they fund. As a result, this bill will reduce the time and effort required to develop a CRADA, reduce the uncertainty that can deter companies from working with

Government, and thus speed the transfer and commercialization of laboratory technology to the American people.

The bill is an important step toward making our Government's huge investment in science and technology, made primarily to carry out important Government missions, more useful to interested commercial companies and our economy.

I especially wish to applaud Chairwoman Morella for her leadership on this bill and her efforts to promote technology transfer. H.R. 2196 represents the type of legislation which this new Congress must undertake. By rethinking and improving the method our Government conducts its business, without the need to invoke new spending authority, H.R. 2196 signals a new approach to Government technology policy legislation.

I am pleased to join my distinguished colleague, Mr. Brown, the Committee's ranking minority member, in co-sponsoring H.R. 2196. There's been a strong bipartisan support for this bill and I look forward to continuing to work with him and the members of the minority as we bring the bill to the House floor.

I'm also pleased that 2196 includes amendments of the Fastener Quality Act. These amendments are very important to the fastener industry, and we need to include these changes to the current Act. And the reason for it I think is quite clear. This Committee marked up the Fastener Quality Act in 1991. I attached an amendment to form the Fastener Advisory Committee.

This Committee was to determine if the Act would have a detrimental impact on business. The Fastener Advisory Committee reported that without their recommended changes, the burden of cost would be close to $1 billion on the fastener industry. We attempted in the last Congress to amend the law, but unfortunately we were not successful.

We had language to pass, we had language pass the House and Senate, however, the language did die in conference. This Committee addresses the concerns of the Fastener Advisory Committee, heat mill certification, mixing of like certified fasteners and the sale of minor non-conformance.

Working with this Congress and NIST, the Fastener Public Law Task Force, comprised of members from manufacturing, importing and distributing, has worked to improve the law while maintaining safety and quality. Public Law Task Force represents 85 percent of all the companies involved in the manufacture or distribution and importation of fasteners and their suppliers in the United States. Combined, the Task Force represents over 100,000 employees in all 50 states.

We have worked with both sides of the aisle, the Administration, manufacturers, distributors and importers to reach a solution. I ask all my colleagues to approve these changes as we take them up today.

[A copy of H.R. 2196 follows:]

H.R. 2196, AS REPORTED BY THE SUBCOMMITTEE ON TECHNOLOGY ON OCTOBER 18, 1995

Strike all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Technology Transfer and Advancement Act of 1995".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Bringing technology and industrial innovation to the marketplace is central to the economic, environmental, and social well-being of the people of the United States.

(2) The Federal Government can help United States business to speed the development of new products and processes by entering into cooperative research and development agreements which make available the assistance of Federal laboratories to the private sector, but the commercialization of technology and industrial innovation in the United States depends upon actions by business.

(3) The commercialization of technology and industrial innovation in the United States will be en-

banced if companies, in return for reasonable compensation to the Federal Government, can more easily obtain exclusive licenses to inventions which develop as a result of cooperative research with scientists employed by Federal laboratories.

SEC. 3. USE OF FEDERAL TECHNOLOGY.

Subparagraph (B) of section 11(e)(7) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(e)(7)(B)) is amended to read as follows:

"(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if the amount so transferred by that agency (as determined under such subparagraph) would exceed $10,000.".

SEC. 4. TITLE TO INTELLECTUAL PROPERTY ARISING FROM COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

Subsection (b) of section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(b)) is amended to read as follows:

"(b) ENUMERATED AUTHORITY.—(1) Under an agreement entered into pursuant to subsection (a)(1), the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under the agreement, for reason-

able compensation when appropriate. The laboratory shall ensure that the collaborating party has the option to choose an exclusive license for a field of use for any such invention under the agreement or, if there is more than one collaborating party, that the collaborating parties are offered the option to hold licensing rights that collectively encompass the rights that would be held under such an exclusive license by one party. In consideration for the Government's contribution under the agreement, grants under this paragraph shall be subject to the following explicit conditions:

"(A) A nonexclusive, nontransferable, irrevocable, paid-up license from the collaborating party to the laboratory to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of section 552(b)(4) of title 5, United States Code, or which would be considered as such if it had been obtained from a non-Federal party.

"(B) If a laboratory assigns title or grants an exclusive license to such an invention, the Government shall retain the right—

"(i) to require the collaborating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in the applicant's licensed field of use, on terms that are reasonable under the circumstances; or

"(ii) if the collaborating party fails to grant such a license, to grant the license itself.

"(C) The Government may exercise its right retained under subparagraphs (B) (ii) and (iii) only if the Government finds that—

"(i) the action is necessary to meet health or safety needs that are not reasonable satisfied by the collaborating party;

"(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the collaborating party; or

"(iii) the collaborating party has failed to comply with an agreement containing provisions described in subsection (c)(4)(B).

"(2) Under agreements entered into pursuant to subsection (a)(1), the laboratory shall ensure that a collaborating party may retain title to any invention made solely by its employee in exchange for normally granting the

Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government for research or other Government purposes.

"(3) Under an agreement entered into pursuant to subsection (a)(1), a laboratory may—

"(A) accept, retain, and use funds, personnel, services, and property from a collaborating party and provide personnel, services, and property to a collaborating party;

"(B) use funds received from a collaborating party in accordance with subparagraph (A) to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency; and

"(C) to the extent consistent with any applicable agency requirements or standards of conduct, permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government.

"(4) A collaborating party in an exclusive license in any invention made under an agreement entered into pur-

suant to subsection (a)(1) shall have the right of enforcement under chapter 29 of title 35, United States Code.

"(5) A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement pursuant to subsection (a)(1) may use or obligate royalties or other income accruing to the laboratory under such agreement with respect to any invention only—

"(A) for payments to inventors;

"(B) for a purposes described in clauses (i), (iii), and (iv) of section 14(a)(1)(B); and

"(C) for scientific research and development consistent with the research and development missions and objectives of the laboratory.".

SEC. 5. DISTRIBUTION OF INCOME FROM INTELLECTUAL PROPERTY RECEIVED BY FEDERAL LABORATORIES.

Section 14 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710c) is amended—

(1) by amending subsection (a)(1) to read as follows:

"(1) Except as provided in paragraphs (2) and (4), any royalties or other payments received by a Federal agency from the licensing and assignment of inventions under agreements entered into by Federal

laboratories under section 12, and from the licensing of inventions of Federal laboratories under section 207 of title 35, United States Code, or under any other provision of law, shall be retained by the agency whose laboratory produced the invention and shall be disposed of as follows:

"(A)(i) The head of the agency or laboratory, or such individual's designee, shall pay each year the first $2,000, and thereafter at least 15 percent, of the royalties or other payments to the inventor or coinventors.

"(ii) An agency or laboratory may provide appropriate incentives, from royalties, or other payments, to employees of a laboratory who contribute substantially to the technical development of licensed or assigned inventions between the time that the intellectual property rights to such inventions are legally asserted and the time of the licensing or assigning of the inventions.

"(iii) The agency or laboratory shall retain the royalties and other payments received from an invention until the agency or laboratory makes payments to employees of a laboratory under clause (i) or (ii).

"(B) The balance of the royalties or other payments shall be transferred by the agency to its laboratories, with the majority share of the royalties or other payments from any invention going to the laboratory where the invention occurred. The royalties or other payments so transferred to any laboratory may be used or obligated by that laboratory during the fiscal year in which they are received or during the succeeding fiscal year—

"(i) to reward scientific, engineering, and technical employees of the laboratory, including developers of sensitive or classified technology, regardless of whether the technology has commercial applications;

"(ii) to further scientific exchange among the laboratories of the agency;

"(iii) for education and training of employees consistent with the research and development missions and objectives of the agency or laboratory, and for other activities that increase the potential for transfer of the technology of the laboratories of the agency;

"(iv) for payment of expenses incidental to the administration and licensing of intellectual property by the agency or laboratory with respect to inventions made at that laboratory, including the fees or other costs for the services of other agencies, persons, or organizations for intellectual property management and licensing services; or

"(v) for scientific research and development consistent with the research and development missions and objectives of the laboratory.

"(C) All royalties or other payments retained by the agency or laboratory after payments have been made pursuant to subparagraphs (A) and (B) that is unobligated and unexpended at the end of the second fiscal year succeeding the fiscal year in which the royalties and other payments were received shall be paid into the Treasury.";

(2) in subsection (a)(2)—

(A) by inserting "or other payments" after "royalties"; and

(B) by striking "for the purposes described in clauses (i) through (iv) of paragraph (1)(B) during that fiscal year or the succeeding fiscal year" and inserting in lieu thereof "under paragraph (1)(B)";

(3) in subsection (a)(3), by striking "$100,000" both places it appears and inserting "$150,000";

(4) in subsection (a)(4)—

(A) by striking "income" each place it appears and inserting in lieu thereof "payments";

(B) by striking "the payment of royalties to inventors" in the first sentence thereof and inserting in lieu thereof "payments to inventors";

(C) by striking "clause (i) of paragraph (1)(B)" and inserting in lieu thereof "clause (iv) of paragraph (1)(B)";

(D) by striking "payment of the royalties," in the second sentence thereof and inserting in lieu thereof "offsetting the payments to inventors,"; and

(E) by striking "clauses (i) through (iv) of"; and

(5) by amending paragraph (1) of subsection (b) to read as follows:

"(1) by a contractor, grantee, or participant, or an employee of a contractor, grantee, or participant, in an agreement or other arrangement with the agency, or".

SEC. 6. EMPLOYEE ACTIVITIES.

Section 15(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710d(a)) is amended—

(1) by striking "the right of ownership to an invention under this Act" and inserting in lieu thereof "ownership of or the right of ownership to an invention made by a Federal employee"; and

(2) by inserting "obtain or" after "the Government, to".

SEC. 7. AMENDMENT TO BAYH-DOLE ACT.

Section 210(e) of title 35, United States Code, is amended by striking ", as amended by the Federal Technology Transfer Act of 1986,".

SEC. 8. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACT AMENDMENTS.

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended—

(1) in section 10(a)—

(A) by striking "nine" and inserting in lieu thereof "15"; and

(B) by striking "five" and inserting in lieu thereof "10";

(2) in section 15—

(A) by striking "Pay Act of 1945; and" and inserting in lieu thereof "Pay Act of 1945;"; and

(B) by inserting "; and (h) the provision of transportation services for employees of the Institute between the facilities of the Institute and nearby public transportation, notwithstanding section 1344 of title 31, United States Code" after "interests of the Government"; and

(3) in section 19, by striking "nor more than forty" and inserting in lieu thereof "nor more than 60".

SEC. 9. RESEARCH EQUIPMENT.

Section 11(i) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710(i)) is amended—

(1) by inserting "loan, lease," after "department, may"; and

(2) by inserting "Actions taken under this subsection shall not be subject to Federal requirements on the disposal of property." after "education and research activities.".

SEC. 10. PERSONNEL.

The personnel management demonstration project established under section 10 of the National Bureau of Standards Authorization Act for Fiscal Year 1987 (15 U.S.C. 275 note) is extended indefinitely.

SEC. 11. FASTENER QUALITY ACT AMENDMENTS.

(a) SECTION 2 AMENDMENTS.—Section 2 of the Fastener Quality Act (15 U.S.C. 5401) is amended—

(1) by striking subsection (a)(4), and redesignating paragraphs (5) through (9) as paragraphs (4) through (8), respectively;

(2) in subsection (a)(7), as so redesignated by paragraph (1) of this subsection, by striking "by lot number"; and

(3) in subsection (b), by striking "used in critical applications" and inserting in lieu thereof "in commerce".

(b) SECTION 3 AMENDMENTS.—Section 3 of the Fastener Quality Act (15 U.S.C. 5402) is amended—

(1) in paragraph (1)(B) by striking "having a minimum tensile strength of 150,000 pounds per square inch" and inserting in lieu thereof "having a minimum Rockwell C hardness of 40 or above";

(2) in paragraph (2)—

(A) by inserting "International Organization for Standardization," after "Society of Automotive Engineers,"; and

(B) by inserting "consensus" after "or any other";

(3) in paragraph (5)—

(A) by inserting "or" after "standard or specification," in subparagraph (B);

(B) by striking "or" at the end of subparagraph (C);

(C) by striking subparagraph (D); and

(D) by inserting "or produced in accordance with ASTM F 432" after "307 Grade A";

(4) in paragraph (6) by striking "other person" and inserting in lieu thereof "government agency";

(5) in paragraph (8) by striking "Standard" and inserting in lieu thereof "Standards";

(6) by striking paragraph (11) and redesignating paragraphs (12) through (15) as paragraphs (11) through (14), respectively;

(7) in paragraph (13), as so redesignated by paragraph (6) of this subsection, by striking ", a government agency" and all that follows through "markings of any fastener" and inserting in lieu thereof "or a government agency"; and

(8) in paragraph (14), as so redesignated by paragraph (6) of this subsection, by inserting "for the purpose of achieving a uniform hardness" after "quenching and tempering".

(c) SECTION 4 REPEAL.—Section 4 of the Fastener Quality Act (15 U.S.C. 5403) is repealed.

(d) SECTION 5 AMENDMENTS.—Section 5 of the Fastener Quality Act (15 U.S.C. 5404) is amended—

(1) in subsection (a)(1)(B) and (2)(A)(i) by striking "subsections (b) and (c)" and inserting in lieu thereof "subsections (b), (c), and (d)";

(2) in subsection (c)(2) by striking "or, where applicable" and all that follows through "section 7(c)(1)";

(3) in subsection (c)(3) by striking ", such as the chemical, dimensional, physical, mechanical, and any other";

(4) in subsection (c)(4) by inserting "except as provided in subsection (d)," before "state whether"; and

(5) by adding at the end the following new subsection:

"(d) ALTERNATIVE PROCEDURE FOR CHEMICAL CHARACTERISTICS.—Notwithstanding the requirements of subsections (b) and (c), a manufacturer shall be deemed

to have demonstrated, for purposes of subsection (a)(1), that the chemical characteristics of a lot conform to the standards and specifications to which the manufacturer represents such lot has been manufactured if the following requirements are met:

"(1) The coil or heat number of metal from which such lot was fabricated has been inspected and tested with respect to its chemical characteristics by a laboratory accredited in accordance with the procedures and conditions specified by the Secretary under section 6.

"(2) Such laboratory has provided to the manufacturer, either directly or through the metal manufacturer, a written inspection and testing report, which shall be in a form prescribed by the Secretary by regulation, listing the chemical characteristics of such coil or heat number.

"(3) The report described in paragraph (2) indicates that the chemical characteristics of such coil or heat number conform to those required by the standards and specifications to which the manufacturer represents such lot has been manufactured.

"(4) The manufacturer demonstrates that such lot has been fabricated from the coil or heat number

of metal to which the report described in paragraphs (2) and (3) relates.

In prescribing the form of report required by subsection (c), the Secretary shall provide for an alternative to the statement required by subsection (c)(4), insofar as such statement pertains to chemical characteristics, for cases in which a manufacturer elects to use the procedure permitted by this subsection.".

(e) SECTION 6 AMENDMENT.—Section 6(a)(1) of the Fastener Quality Act (15 U.S.C. 5405(a)(1)) is amended by striking "Within 180 days after the date of enactment of this Act, the" and inserting in lieu thereof "The".

(f) SECTION 7 AMENDMENTS.—Section 7 of the Fastener Quality Act (15 U.S.C. 5406) is amended—

(1) by amending subsection (a) to read as follows:

"(a) DOMESTICALLY PRODUCED FASTENERS.—It shall be unlawful for a manufacturer to sell any shipment of fasteners covered by this Act which are manufactured in the United States unless the fasteners—

"(1) have been manufactured according to the requirements of the applicable standards and specifications and have been inspected and tested by a laboratory accredited in accordance with the proce-

dures and conditions specified by the Secretary under section 6; and

"(2) an original laboratory testing report described in section 5(c) and a manufacturer's certificate of conformance are on file with the manufacturer, or under such custody as may be prescribed by the Secretary, and available for inspection,";

(2) in subsection (c)(2) by inserting "to the same" after "in the same manner and";

(3) in subsection (d)(1) by striking "certificate" and inserting in lieu thereof "test report"; and

(4) by striking subsections (e), (f), and (g) and inserting in lieu thereof the following:

"(e) COMMINGLING.—It shall be unlawful for any manufacturer, importer, or private label distributor to commingle like fasteners from different lots in the same container, except that such manufacturer, importer, or private label distributor may commingle like fasteners of the same type, grade, and dimension from not more than two tested and certified lots in the same container during repackaging and plating operations. Any container which contains fasteners from two lots shall be conspicuously marked with the lot identification numbers of both lots.

"(f) SUBSEQUENT PURCHASER.—If a person who purchases fasteners for any purpose so requests either

prior to the sale or at the time of sale, the seller shall conspicuously mark the container of the fasteners with the lot number from which such fasteners were taken.".

(g) SECTION 9 AMENDMENT.—Section 9 of the Fastener Quality Act (15 U.S.C. 5408) is amended by adding at the end the following new subsection:

"(d) ENFORCEMENT.—The Secretary may designate officers or employees of the Department of Commerce to conduct investigations pursuant to this Act. In conducting such investigations, those officers or employees may, to the extent necessary or appropriate to the enforcement of this Act, exercise such authorities as are conferred upon them by other laws of the United States, subject to policies and procedures approved by the Attorney General.".

(h) SECTION 10 AMENDMENTS.—Section 10 of the Fastener Quality Act (15 U.S.C. 5409) is amended—

(1) in subsections (a) and (b), by striking "10 years" and inserting in lieu thereof "5 years"; and

(2) in subsection (b), by striking "any subsequent" and inserting in lieu thereof "the subsequent".

(i) SECTION 13 AMENDMENT.—Section 13 of the Fastener Quality Act (15 U.S.C. 5412) is amended by striking "within 180 days after the date of enactment of this Act".

(j) SECTION 14 REPEAL.—Section 14 of the Fastener Quality Act (15 U.S.C. 5413) is repealed.

SEC. 12. STANDARDS CONFORMITY.

(a) USE OF STANDARDS.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) by striking ", including comparing standards" and all that follows through "Federal Government";

(2) by redesignating paragraphs (3) through (11) as paragraphs (4) through (12), respectively; and

(3) by inserting after paragraph (2) the following new paragraph:

"(3) to compare standards used in scientific investigations, engineering, manufacturing, commerce, industry, and educational institutions with the standards adopted or recognized by the Federal Government and to coordinate the use by Federal agencies of private sector standards, emphasizing where possible the use of standards developed by private, consensus organizations;".

(b) CONFORMITY ASSESSMENT ACTIVITIES.—Section 2(b) of the National Institute of Standards and Technology Act (15 U.S.C. 272(b)) is amended—

(1) by striking "and" at the end of paragraph (11), as so redesignated by subsection (a)(2) of this section;

(2) by striking the period at the end of paragraph (12), as so redesignated by subsection (a)(2) of this section, and inserting in lieu thereof "; and"; and

(3) by adding at the end the following new paragraph:

"(13) to coordinate Federal, State, local, and private sector standards conformity assessment activities, with the goal of eliminating unnecessary duplication and complexity in the development and promulgation of conformity assessment requirements and measures.".

(c) TRANSMITTAL OF PLAN TO CONGRESS.—The National Institute of Standards and Technology shall, by January 1, 1996, transmit to the Congress a plan for implementing the amendments made by this section.

The CHAIRMAN. The Chair would now recognize Mr. Brown for any opening statement he might have.

Mr. BROWN. Thank you, Mr. Chairman. I do have a brief statement. As you have already mentioned, I did join with you and Mrs. Morella and Mr. Tanner as original co-sponsors of this legislation. And as you've also commented, this Committee has tended to speak with one voice on technology transfer matters for the last two decades, and I hope that tradition can continue.

The Technology Transfer and Advancement Act, as introduced, clearly follows in the tradition of the Bayh-Dole and Stevenson-Wydler Act, and I view positively many of the changes made since it was introduced. Therefore, I congratulate you and other members on both sides who have contributed to these revisions.

I am, I do have some concerns about the Fastener Quality Act amendments. You and I have been through the development of this legislation over a period of several years. We recognize the importance of it. You commented already about the very real threat that defective fasteners frequently, counterfeit and pirated into this country, have caused over the years, and they can be the cause of very serious accidents and difficulties of many kinds, and that we do need to have an industry supported, effective program to preclude getting fake fasteners or defective fasteners into the stream of commerce.

It was my hope that the amendments that we adopted on the floor a couple of weeks ago to the Science Authorization Bill, which I believe you were the author of, would correct the defects. And I'm still not clear whether they do or not. I supported them at the time with the understanding that I did need further time to study and review the problem.

Now, I understand we're attaching amendments which are similar but not identical to the ones we adopted on the floor, that you will propose these amendments as a part of this Act, or you will support them. And I'm still not clear what additional changes have been made. And I have been given, although I have not had a chance to study, substantial amount of correspondence indicating that there's still some problems in the fastener industry with regard to all the details here.

Now, I'm not indicating that this is necessarily a fatal flaw in the language. And I might be willing to accept any number of compromises that would allow us to move an agreed-upon bill expeditiously. I'm not objecting to that process. But I'm still not fully confident that I understand all of the changes and the reaction within the fastener community; that is, those who are involved with fasteners, to the changes that are being proposed. And I'm expressing those reservations to you. And when we come to the actual amendment, I might make some other suggestions.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Brown. Mrs. Morella, do you wish to be recognized for an opening statement?

Mrs. MORELLA. Yes, thank you. I'll try to make it brief. I'd ask unanimous consent that an opening statement be included in the record, Mr. Chairman, and simply point out that this Committee does have a history of encouraging in a strong bipartisan manner the transfer of technology and collaboration between our Federal

laboratories and industry. And this particular bill before us that we're going to consider in this full Committee, H.R. 2196, follows in that tradition.

And I do very much commend and indicate my pleasure at having the Chairman of the full Committee as a co-sponsor, and having the distinguished ranking member, Congressman Brown, subcommittee ranking member Congressman Tanner, also as co-sponsors of the bill before us. And I would certainly welcome any other co-sponsors as we prepare the bill for floor consideration.

H.R. 2196 will help facilitate and speed technology cooperation between industry and our Federal laboratories, thus benefitting our economy and our citizens. In so doing, it gives both companies and Federal laboratories clear guidelines regarding intellectual property rights to technology developed under cooperative research and development agreement, a CRADA, guidelines that will reduce negotiating time, and enhance the likelihood of prompt commercialization of new inventions. In this way, a CRADA is made more attractive to both American industry and Federal laboratories.

The bill is important because it comes at a time when both Federal labs and industry need to work closer together for their mutual benefit and our national competitiveness. Specifically, the bill enhances commercialization of technology and industrial innovation in the United States by guaranteeing to a collaborating partner from industry in a CRADA the option to choose an exclusive license for a field of use. The collaborating party would have the right to use the technology in exchange for reasonable compensation to the laboratory.

The bill also provides for adequate minimum statutory rights for the Federal Government and the technology. And in addition, H.R. 2196 provides important incentives in royalty sharing to Federal laboratory personnel who create new technologies by enhancing the financial incentives and rewards given to Federal laboratory scientists for technology that results in marketable products. It's important to note that these incentives are paid for from the income the laboratories receive for commercialized technology, and not from tax dollars.

So I'm pleased that this bill has a strong support in this Congress and in past Congresses from the Administration, a series of Federal agency officials, Federal laboratory directors, as well as a broad spectrum of academicians, industry association representatives, and private sector offices. So I urge all my colleagues to support this important bill and to report out favorably 2196. I thank you, Mr. Chairman, and the members of my subcommittee.

[The prepared statement of Mrs. Morella and a memorandum from Mrs. Morella to Mr. Walker, dated October 19, 1995, follow:]

Opening Statement of
Constance A. Morella
Chairwoman, Subcommittee on Technology

Science Committee Markup on
"H.R. 2196, the National Technology Transfer and Advancement Act of 1995"

October 25, 1995

Mr. Chairman, the economic advances of the 21st century are rooted in the research and development performed in laboratories around the world today. Our Nation's future well-being, therefore, becomes dependent upon the continuous transfer of basic science and technology from our laboratories, including our Federal labs, into commercial goods and services.

With over 700 Federal laboratories throughout the United States, occupying one-fifth of the country's lab and equipment capabilities, and employing one of every six scientists in the United States, the laboratories are one of our Nation's greatest assets -- yet, they are also a largely untapped resource of technical expertise. Our future economic well-being is too important to exclude the resources and abilities of the scientists in our Federal labs.

Mr. Chairman, this Committee has a history of encouraging, in a strong bipartisan manner, the transfer of technology and collaboration between our Federal laboratories and industry . This morning, as we

consider H.R. 2196, the National Technology Transfer and Advancement Act of 1995, we are following in that tradition. I am very pleased to have my distinguished colleagues, Committee Ranking Member, Congressman Brown, Subcommittee Ranking Member, Congressman Tanner, and you, Chairman Walker, as cosponsors of the bill before us and I would welcome additional cosponsors as we prepare the bill for floor consideration.

H.R. 2196 will help facilitate and speed technology cooperation between industry and our Federal laboratories, thus benefitting our economy and our citizens. It does so by giving both companies and Federal laboratories clear guidelines regarding intellectual property rights to technology developed under a Cooperative Research and Development Agreement (CRADA) -- guidelines that will reduce negotiating time and enhance the likelihood of prompt commercialization of new inventions. In this way, a CRADA is made more attractive to both American industry and Federal laboratories.

H.R. 2196 is important because it comes at a time when both Federal laboratories and industry need to work closer together for their mutual benefit and our national competitiveness. Specifically, the bill enhances commercialization of technology and industrial innovation in the United States by guaranteeing to a collaborating partner from industry, in a CRADA, the option to choose an exclusive license for

a field of use. The collaborating party would have the right to use the technology in exchange for reasonable compensation to the laboratory. The bill also provides for adequate minimum statutory rights for the Federal government in the technology.

In addition, H.R. 2196 provides important incentives in royalty sharing to Federal laboratory personnel who create new technologies by enhancing the financial incentives and rewards given to Federal laboratory scientists for technology that results in marketable products. It is important to note that these incentives are paid from the income the laboratories received for commercialized technology, not from tax dollars.

I am very pleased with the strong support H.R. 2196 has received. In this and the past Congress, from the Administration, and a series of Federal agency officials, Federal laboratory directors, as well as a broad spectrum of academicians, industry association representatives, and private sector officers.

I urge all of my colleagues to support this important bill and report out H.R. 2196 favorably to the House. Thank you.

COMMITTEE ON SCIENCE
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

October 19, 1995

MEMORANDUM

TO: The Honorable Robert S. Walker, Chairman

FROM: The Honorable Constance A. Morella, Chairwoman C.M.

SUBJECT: Subcommittee Report of H.R. 2196, the National Technology Transfer and Advancement Act of 1995

The Subcommittee on Technology has completed consideration of H.R. 2196, the National Technology Transfer and Advancement Act of 1995. On Wednesday, October 18, 1995, the Subcommittee ordered the bill, as amended, reported by voice vote to the Full Committee for further consideration. Copies of the bill and a sectional analysis are attached.

Only one change was made to the bill as introduced. An amendment in the nature of a substitute, which I introduced, was adopted by voice vote. This substitute amendment contained the base text of H.R. 2196, as introduced, and certain provisions in H.R. 2405, the Omnibus Civilian Science Authorization Act of 1995, which passed the House on October 12, 1995.

The Subcommittee on Technology and the Subcommittee on Basic Research held a joint hearing on technology transfer on June 27, 1995, focusing on H.R. 2196. Witnesses from National Laboratories and representatives from industry provided favorable comments on the draft legislation of H.R. 2196. In addition, the Administration has expressed its support for the bill. The testimony supplemented the hearing record on the bill already established in the 103rd Congress. In the previous Congress, hearings in the House and Senate were held on the previous version of the bill, H.R. 3590 and S. 1537. The bills received strong support from the Administration and a series of Federal agency officials, as well as a broad spectrum of academicians and industry association representatives.

The CHAIRMAN. Mr. Tanner, opening statement?

Mr. TANNER. Thank you very much, Mr. Chairman. I want to thank Mrs. Morella for working with me and asking me to be a cosponsor of H.R. 2196. I think it reaffirms this Committee's traditional support for promoting Government-industry partnerships. And we also in this bill ensure the Government investment in our Federal laboratories provides the maximum return on the taxpayers' investment. This bill is a step in that direction, and I commend it to the Committee, and I appreciate this opportunity.

Thank you.

The CHAIRMAN. Thank you, Mr. Tanner. Are there any other members seeking recognition for an opening statement?

[No response.]

The CHAIRMAN. If not, then we will open the bill for discussion. I ask unanimous consent the bill be considered as read and open to amendment at any point. Without objection. I ask members to proceed with the amendments in the order of the roster. Without objection.

Mr. BROWN. Mr. Chairman?

The CHAIRMAN. Mr.—

Mr. BROWN. I'm unaware of any amendments having been noticed. But I do have a couple of amendments.

The CHAIRMAN. Mrs. Morella, I think, has some.

Mr. BROWN. By all means.

The CHAIRMAN. Mrs. Morella?

Mrs. MORELLA. Yes, Mr. Chairman. I do have an amendment that I ask be accepted as read. It's an en bloc amendment to make just technical changes.

The CLERK. En bloc amendment to H.R. 2196 offered by Mrs. Morella—

Mrs. MORELLA. Mr. Chairman, I ask that the Committee dispense with the further reading of the amendment.

The CHAIRMAN. Without objection. The gentlelady is recognized for five minutes to offer your amendment.

Mrs. MORELLA. Thank you. It will take much less time than that, Mr. Chairman. Because on June 27th, my Technology Subcommittee and the Basic Research Subcommittee chaired by my distinguished colleague from New Mexico, Mr. Schiff, held a joint hearing on technology transfer and on Federal laboratories, with a focus on this bill, H.R. 2196. And the witnesses at the hearing testified very favorably in support of the bill and offered some suggestions to the bill.

So I've taken some of these suggestions offered at the June hearing, incorporated them into the en bloc amendment before you. And there's a detailed analysis and description of the amendment that has been distributed to all members of the Committee.

Mr. Chairman, the record of the need for this legislation is large. I've received input from a great number of organizations and individuals regarding H.R. 2196, and to the extent practicable, I've attempted to accommodate the concerns of all interested parties. And this en bloc amendment follows that approach. And I urge my colleagues to support the amendment.

[The en bloc amendment offered by Mrs. Morella follows:]

EN BLOC AMENDMENTS TO H.R. 2196

OFFERED BY MRS. MORELLA

Page 3, line 2, insert ", through such agreement," after "laboratory shall ensure".

Page 4, line 13, strike "reasonable" and insert in lieu thereof "reasonably".

Page 5, line 15, strike "and".

Page 5, line 22, strike the period and insert in lieu thereof "; and".

Page 5, after line 22, insert the following new subparagraph:

"(D) waive, subject to reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of a collaborating party.

Page 6, line 10, insert "(ii)," after "clauses (i),".

Page 7, lines 4 and 5, strike "agency whose laboratory" and insert in lieu thereof "laboratory which".

Page 7, lines 14 through 20, strike "employees of a laboratory" and all that follows through "assigning of the inventions" and insert in lieu thereof "laboratory employees who are not an inventor of such inventions but who substantially increased the technical value of such inventions".

Page 13, line 24, through page 14, line 5, amend paragraph (2) to read as follows:

(2) in paragraph (2), by inserting "consensus" after "or any other";

The CHAIRMAN. Is there further discussion of the amendment?

Mr. BROWN. Mr. Chairman?

The CHAIRMAN. Mr. Brown.

Mr. BROWN. Just by way of further explanation, I'm looking at the last amendment offered by Mrs. Morella, on page 13, line 24, amend paragraph (2) to read as follows. That has the effect of striking paragraph (A), which inserts "International Organization for Standardization" after "Society of Automotive Engineers."

Why did you originally have the IOS in, and now with your technical amendment, you're striking it? Could you just give us a little background on that subject?

The CHAIRMAN. I would say to the gentleman, this is all things that we have been trying to work with the industry on. And it's my understanding that IOS is not a consensus standards organization. It's not obligated to resolve negative balance and use as a majority by country rule, even when a major producing country has voted negative.

And so therefore, it's thought that this could have a detrimental impact. If IOS is given legal blessing as a consensus standard organization, it would be in the current draft language contained in the Fastener Act Amendments that were previously approved by the Committee. And it would undermine the consensus standards that were worked out by the American Society of Mechanical Engineers, the American Society for Testing Materials, the Society of Automotive Engineers, and the American Standards, National Standards Institute and similar bodies, by employing equal recognition of standards adopted by an organization that does not operate by consensus.

The Standards Advisory Committee did not recommend IOS as a consensus standard organization. Inclusion of this draft in the original drafts of the Fastener Quality Act amendments was an error. And we're trying to correct that at this time.

Mr. BROWN. Thank you very much for that explanation, Mr. Chairman.

The CHAIRMAN. Is there further discussion? Mr. Ehlers?

Mr. EHLERS. Thank you, Mr. Chairman. I would just like to add something which applies not just to the amendment, but to the bill itself, and I certainly support both the amendment and the bill.

Last Friday I spoke at the University of Chicago at a 50th anniversary of two of their major scientific institutes. And also on the program was the associate director of Argonne Laboratory, who in the course of his speech, talked about technology transfer, spoke about all the various programs that have been tried through the years for technology transfer, the applied technology programs, things of this sort.

And concluded by saying that in his 20-odd years of experience in dealing with this, no other program began to approach the effectiveness of the Cooperative Research and Development Agreements. And I'm pleased to see this bill reinforce those agreements, and in fact, improve them.

But he made the point by specific numbers in terms of the companies they had helped, the jobs that were created. He said it was a tremendously successful program for the amount of Federal money involved. The industry provided much more of the money.

And furthermore, he said, it was not only beneficial to the companies that engaged in CRADAs, but also beneficial to the scientists of the laboratory. Because it gave them a focus for some of their research.

So Mr. Chairman, I just wanted to pass those comments on to you. And I think they are appropriate to this bill and I think indicate the importance of CRADAs.

Thank you.

The CHAIRMAN. Thank you, Mr. Ehlers. Is there additional discussion on the amendment of the gentlelady from Maryland?

[No response.]

The CHAIRMAN. If not, the Chair would put the question. Those in favor will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[No response.]

The CHAIRMAN. The ayes have it. The amendment is adopted.

Mrs. Morella, you have an additional amendment?

Mrs. MORELLA. Yes, thank you, Mr. Chairman. This amendment accomplishes two objectives. First, it codifies the present requirements of OMB Circular A119. It was originally promulgated in 1982 and revised in 1993, which requires Federal agencies to adopt and use standards developed by voluntary standards bodies and work closely with consensual standards bodies to ensure that the standards developed by those bodies are consistent with agency needs.

And secondly, it requires agencies to annually report to Congress on the reasons for deviating from voluntary consensual standards when the head of the agency deems that consensual standards aren't appropriate to the agency needs.

So adherence to OMB Circular A119 is a matter of great concern to industry as the Federal record with regard to the utilization of voluntary consensual standards is mixed, at best. The amendment will have the effect of assisting agencies in focusing their attention on the need to work with these consensual standards bodies wherever and whenever appropriate. And it would assist Congress in monitoring the agencies' efforts to implement the OMB Circular A119.

The amendment is consistent with recommendations that were made to our Committee as part of the testimony of the National Research Council and quite frankly, it essentially came out of their report that was issued in June of this year, on standards and conformity assessment in the 21st century.

Thank you, Mr. Chairman. I urge adoption.

[The amendment offered by Mrs. Morella follows:]

AMENDMENT TO H.R. 2196

OFFERED BY MRS. MORELLA

Page 21, after line 19, insert the following new subsection:

(d) UTILIZATION OF CONSENSUS STANDARDS BY FEDERAL AGENCIES; REPORTS.—(1) To the extent practicable, all Federal agencies and departments shall use, for procurement and regulatory applications, standards that are developed or adopted by voluntary consensus standards bodies.

(2) Federal agencies and departments shall consult with voluntary, private sector, consensus standards bodies, and shall participate with such bodies in the development of standards, as appropriate in carrying out paragraph (1).

(3) If a Federal agency or department elects to use, for procurement or regulatory applications, standards that are not developed or adopted by voluntary consensus standards bodies, the head of such agency or department shall transmit to the Office of Management and Budget an explanation of the reasons for adopting such standards. The Office of Management and Budget shall annually transmit to the Congress all explanations received by it under this subsection.

The CHAIRMAN. I thank the gentlelady. Is there additional discussion of the gentlelady's amendment?

[No response.]

The CHAIRMAN. If not, the Chair will put the question. Those in favor of the amendment will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[No response.]

The CHAIRMAN. The ayes have it. The amendment is agreed to. Are there additional amendments?

Mr. BROWN. Mr. Chairman?

The CHAIRMAN. Mr. Brown.

Mr. BROWN. Mr. Chairman, I have two additional amendments. The first would strike the fastener provisions. And I ask that that be distributed at this time.

The CHAIRMAN. The Clerk will distribute the amendment. The gentleman will explain his amendment.

Mr. BROWN. Mr. Chairman, as I mentioned in my opening remarks, I am seriously concerned about section 11, which amends the Fastener Quality Act. While it's universally accepted that the Act has some technical problems and a few changes are necessary, these changes go much further than what was agreed to last year.

Earlier this month on the floor of the House, when confronted with last minute changes in the Fastener amendments, I pointed out that there's very little understanding in the Congress of what we are being asked to do, and indicated my desire that the Committee thoroughly investigate the consequences of our action before we agree to a final version.

Today, after receiving calls from the president of a trade association, the general counsel of a standards organization and the director of standards for a major engineering society, we are correcting our corrections. I wonder how many other changes we would want to make if we had given this bill a thorough airing.

And as I think is the case, we have not had a full hearing on this in recent months. And I think that a matter of this complexity deserves at least some public hearing.

I have learned in the past couple of days that some of these changes are quite controversial among fastener distributors. And I ask unanimous consent at this point to insert in the record a position paper of the Fastener Quality Association which details their concern with this section and some miscellaneous material from others who have expressed concern.

The CHAIRMAN. Without objection.

[The position paper of the Fastener Quality Association follows:]

FASTENER QUALITY ASSOCIATION

POSITION PAPER

30 August 1995

1. BACKGROUND The Fastener Quality Association (FQA) is an association of quality minded members from numerous sectors of the fastener industry. Our association recognizes the absolute need for Federal oversight and enforcement of regulations intended to protect military, industrial, commercial, aerospace, and consumer purchasers from the supply of nonconforming, substandard, or counterfeit parts: namely, fasteners.

2. THE LAW Through the efforts of a diverse yet unified group of concerned citizens supported by responsible representatives, Public Law 101-592 (The Fastener Quality Act) was signed into law on November 16, 1990 by President Bush. Since that time, this Law has gone unimplemented and unenforced, as attempts to change the original Law through amendments have been made.

3. In spite of promotional and lobbying campaigns which claim otherwise,

the industry has not "cleaned itself up". In fact, a March 1995 Editorial in *Fastener Technology International* magazine provided a summary of fastener-related cases from which it can be noted that 15 of the 45 fastener-related cases occurred after passage of the Fastener Quality Act. (See Exhibit "A") This was not by any means a complete listing of current fastener-related cases.

4. THE PROBLEM Reported changes to the Fastener Quality Act are currently included in draft amendments to H.R. 1870 to be offered by Congressman Robert Walker of Pennsylvania and a corresponding bill (S1141) to be introduced by Senator Conrad Burns of Montana. The amendments were to include two workable amendments. Unfortunately, included with these two are numerous additional amendments which if adopted will not only profoundly undermine the original intent of the Law, but will simultaneously impede investigative and prosecutorial efforts to enforce it. U.S. based industries will be placed at a competitive disadvantage on many fronts, as a seriously weakened law will shield foreign suppliers from accountability. These additional amendments will simultaneously encourage close scrutiny of domestically produced fasteners with additional requirements.

5. CONGRESSIONAL FINDINGS: LOT TRACEABILITY The 101st Congress and The President correctly stated in Section 2 *Findings and Purpose* of The Fastener Quality Act that "the lack of traceability by lot number of

fasteners sold in commerce is a serious impediment to effective quality control efforts." This statement is inescapably true, as reams of evidence from dozens of cases has demonstrated the difficult task Federal investigators and prosecutors have in proving beyond a reasonable doubt who the parties responsible for supply of substandard fasteners were, are, or could be.

6. Traceability by lot (or batch) is not only critical to quality control efforts as Congress found: It is also by far the most effective tool available for investigation and detection of fraud. The French, recognizing the critical role of lot traceability in their own recently enacted Fastener Quality Act, now require that the "manufacturing lot number must be shown on the label of the fastener container." (See the Industrial Fastener Institute's July 1995 *Fastener Application Advisory* -- Exhibit "B")

7. The value of Lot Traceability as a quality and investigative tool can not be underestimated. Federal investigators are already faced with numerous challenges and limited resources. Any plan which undermines their ability to detect, investigate, and prosecute fraud is a plan unworthy of support. Commingling undermines such efforts, and on that principal alone, should be stricken down.

8. To date, the cost-benefit studies undertaken to predict the impact of the Fastener Quality Act have been seriously flawed and one sided. For example, although proponents of commingling are quick to point out potential savings for

fastener distributors, they have neither accounted for the costs associated with commingling's impediment to investigation and prosecution efforts against violators of the Act, nor have they considered the cost impact of commingling on fastener users or purchasers which results from the increased variation and uncertainty that inescapably accompanies commingling.

9. It is common sense that given limited resources, and facing many challenging tasks, enforcement officials are not likely to vigorously pursue any plan which inherently hinders their investigative techniques, and provides little prospect for favorable findings in a court of law. Without sufficient investigative and prosecutorial tools, this law should not be implemented. As the amendments to H.R. 1870 would allow commingling by all parties including manufacturers and importers, it is clear that firms which routinely commit fraud may in fact be shielded and protected behind a guise of a governmentally approved and supervised system. The proposed amendment to alter the original findings of Congress, suggesting that "traceability by lot number" is no longer an impediment to quality, is contrary to the most basic principles of quality assurance. This amendment is intended to impede investigation, and thwart quality.

10. COMMINGLING The proposed amendments go even further on issues related to lot control. As proposed in H.R. 1870, commingling will be

permitted in all sectors of the fastener industry including; manufacturing, importation, alteration, wholesale distribution, and retail distribution. Purchasers not wanting to be supplied with commingled product will be compelled to "so request either prior to the sale, or at the time of the sale," presumably each and every time they purchase fasteners for any reason whatsoever. It has not been lost on the proponents of this change that it will wreak havoc on the procurement systems of purchasers and users who will have to draft explicit legally binding contracts for every order of traceable fasteners or dramatically modify their purchasing systems and any related computer programs to achieve the same result. The economic impact thus endured by fastener users who have always expected to receive traceable fasteners will become prohibitively expensive.

11. (poor) Quality Costs Commingling is at the opposite end of a continuum from Lot segregation, control, and purity. Lot segregation and control plays a crucial role in supplier liability and responsiveness to inadvertent error. Quality professionals often refer to a concept known as "external failures". An example of an external failure would be an inherent problem with a particular lot that manages to evade detection by the internal controls of the manufacturer's quality system, including inspection and testing. Such an inherent problem may then manifest itself upon use. The user or customer discovers the problem, and a satisfactory response from the manufacturer is warranted.

12. Without complete and full traceability, the costs of safety recalls to both the public and industry are noncalculable, significant, and transferred from the responsible party -- the fastener industry -- to the purchaser or user. The American Society for Quality Control (ASQC) estimates that the costs associated with external failures as the greatest costs attributable to quality control. Costs associated with external failures do include liability costs, and in some cases, the cost is measured in innocent lives. (See Exhibit "C".)

13. Risk-averse and quality-oriented suppliers therefore place quite a bit of emphasis on avoidance of external failures. However, such failures are not 100% avoidable. No process is perfect all of the time. Suppliers live with the realization that some day an unintentionally nonconforming or defective product could go undetected and subsequently be shipped. Much effort is exerted in avoidance of this possibility, yet being prepared to act responsibly in such a case limits liability exposure and quality costs for both the supplier and the user. A formula currently endorsed by the National Association of Accountants and the American Society for Quality Control, and confirmed by Dr. W. Edwards Deming estimates that upwards of 30% of sales is the cost associated with poor quality. (See Attachment "D")

14. The supplier's primary tool in minimizing liability and economic loss from external failures is full lot traceability. Full lot traceability allows for accurate,

thorough, and complete recall of any lot for any reason, and is particularly crucial for products which, if defective, could cause significant economic loss or be life threatening. It should be noted, for example, that the food and drug industries maintain effective lot control and traceability at minimal cost, and their thoroughness is demonstrated when recalls (detailing lot number(s), geographic locations, distribution channels, etc.) are announced on television.

15. Traceability also provides suppliers, OEMs, distributors, customers, and all users with a quick cost-effective means to verify the integrity of the supply system, as well as the Test Reports, Certifications, and the parts supplied therefrom. For a nominal fee, any purchaser can audit the supply system and even detect fraud. Just as the lot numbers on food products and drugs, (remember the Popsi and Tylenol scares,) can be used for quick and easy investigation, so too can the lot numbers for fasteners. Conversely, commingling (mixing lots) in the supply system diffuses quality control, impedes recalls, and unnecessarily places innocent lives at risk.

16. The domestic manufacturers have made it abundantly clear that they do not wish nor intend to commingle their lots. One must question why the current amendments now would allow such a practice. It has not been lost on domestic manufacturers that the role of traceability is a very important one.

17. ALTERATIONS Problems with altered fasteners have

disproportionately manifested themselves in many industries, notably aerospace. Persons familiar with the fastener fraud cases which plague the U.S. know the frequency with which "reworked," "recycled," and "surplus" parts are closely linked with fastener quality problems. Parts originally manufactured by reputable producers are modified and resold as though newly manufactured and at considerable profit.

18. The Fastener Quality Act addresses this issue by requiring any person who significantly alters fasteners by A) through-hardening, B) electroplating (of fasteners having minimum tensile strengths of 150,000 psi or more), or by C) machining shall be treated as a manufacturer. This section requires retesting of the lot to its applicable standards, and thereby transfers accountability and responsibility for the lot from the original manufacturer to the person who altered or modified the fasteners.

19. One of the newly proposed amendments would change this section dramatically for the worse. This amendment does not consider electro-plating as an alteration unless the fasteners have a minimum Rockwell hardness of HRC 40. This excludes nearly every fastener produced in the world from this requirement. For example, Grade 5 fasteners, Grade 8 fasteners, and Socket Head Cap Screws (ASTM A574, F835, F912, etc.) which are known to be susceptible to hydrogen

embrittlement during electro-plating would be exempted. Hydrogen embrittlement is known to cause sudden and violent fastener failures, so how can an amendment which intends not to hold those responsible for such embrittlement be seriously considered? Alterations remain an industry-wide concern, yet the answer can not be to simply hang the manufacturers out to dry on the risks they might be exposed to when someone else alters their fasteners.

20. It is correct to correlate an HRC hardness scale relationship for the alteration section, moreso than the original 150,000 psi tensile strength limit. However, hydrogen embrittlement has been documented in cases with Rockwell hardnesses as low as HRC 30. Therefore, no engineer would suggest that hydrogen embrittlement of fasteners with a Rockwell hardness of HRC 39 (for example SAE Grade 8 fasteners) is not a serious concern.

21. The original manufacturer should not be held responsible for the alterations performed by others which effect the performance of the fasteners. Rather, this law should empower fastener manufacturers and consensus standards organizations to determine what processes such as electro-plating effect the performance of their fasteners; and thus fasteners subjected to those processes by a distributor or other party shall have to be retested to assure that they continue to be fit for use after the alterations.

22. The FQA's solution to the alteration issue is the amendment of a clause

(D), which would follow Section 3 (1) as currently written. It would read, "or, (D) by any subsequent process deemed by the original manufacturer or a consensus standard as being an alteration." Fastener manufacturers and users are truly the only ones who are in a position to determine which alterations effect the performance of their parts. The performance of many fasteners is affected by processes not currently listed in the law. Additionally, why should a consensus standards organization be prohibited from stating that specific alterations to fasteners produced to particular standards are significant alterations which should be followed by applicable conformance testing.

23. DEFINITION: CONSENSUS STANDARDS ORGANIZATION

The proposed amendments additionally include a change to the definition of a consensus standards organization. That change now describes the International Organization for Standardization (ISO) as a consensus standards organization. Although ISO is a standards-setting organization, its standards should not be described as consensus standards. The American Society for Testing and Materials (ASTM) is a consensus standards organization.

24. The credibility of the ASTM standards lies in the factors which ensure they are true consensus standards. According to ASTM publications, those factors include the following:

1) A voluntary, full consensus approach which brings together people with a diversity of backgrounds, expertise, and knowledge
2) A balanced representation of interests at the standards-writing table
3) Intense round-robin testing to ensure precision
4) Strict balloting and due process procedures to guarantee accurate, up-to-date information
5) An atmosphere that promotes open discussion

25. Whereas, ISO standards are adopted under a system with limited membership, (one vote per country). ISO committees are also not compelled to address negative votes for technical, engineering, quality, or other reasons. As such, ISO should not be referenced as a "consensus standards organization", but simply a "standards organization", a function which it does serve well.

26. Yet another compelling reason to avoid describing ISO standards as consensus standards is that all current ISO Fastener Standards reference ISO 3269 for issues related to quality. ISO 3269 permits sale of nonconforming fasteners, provided some "acceptable quality level" (AQL) is maintained. The pending demise of AQLs has been apparent since Dr. W. Edwards Deming proved the scale of built-in economic losses attributable to shipment of knowingly substandard parts. Many sectors of the U.S. market have long-since dropped AQLs. For example, the U.S. military has withdrawn MIL-STD 105E, its AQL standard. The Fastener Quality Act should not reinvoke practices which have been discarded by U.S. quality experts.

27. The answer to this issue is, of course, to drop this amendment and

allow the Fastener Quality Act to be applied to all standards-setting organizations, and to not therefore describe ISO as a consensus standards organization, while retaining the addition of government agencies as needed. Clearly there has been some confusion over the definitions used in this Act, and it is therefore suggested by The Fastener Quality Association that all of the "quality related" terms used throughout this Act and its applicable regulations be defined and used in accord with ANSI/ISO/ASQC A3534. This standard has been accepted by the American National Standards Institute, the International Organization for Standardization, and the American Society for Quality Control.

28. Nonconformances It has been the concern of many parties that fastener lots with nonconformances, be they minor, incidental, or otherwise, could not be sold in commerce. The engineering, quality, and standards writing communities already have the technical capability and standard practices in place which can assure proper disposition and documentation of nonconformances of any type. Typically, these standards call for a statistically representative randomly selected sample to be drawn from a fully traceable lot and inspected and tested for the feature or characteristic that is nonconforming to identify the greatest variant of range to the requirements for the characteristic or feature. These specimens are selected from the sample for mechanical or performance tests. All data is forwarded

for the user's material review board, which includes engineering, quality, production, purchasing, legal, and management for consideration of use on application through the issuance of a waiver. This is a standard industry practice for handling such cases.

29. The nonconformance issue is properly addressed by one of the two original amendments which corrects the definition of "standards and specifications" and is acceptable as written by the Fastener Quality Association.

30. SUBSEQUENT SALE OF DOMESTIC FASTENERS The proposed amendments now state that it shall be unlawful for a manufacturer to sell any shipment of fasteners unless, "an original laboratory testing report...and a manufacturer's certificate of conformance are on file with the manufacturer...and available for inspection." Before this proposed amendment, a manufacturer's test report alone was sufficient. Why would a mandate that two documents covering the same lot now be required? Would anyone suggest that a manufacturer who so chooses to provide the complete Test Report with the shipment will not have satisfied all of the documentation requirements for certifying the lot(s) in question. The Certified Test Report on its own should suffice, and The Fastener Quality Association believes that this requirement should be changed "such that a Certified Fastener Test Report produced by an accredited laboratory by itself satisfies all documentation requirements, and may be kept on file or sent with shipments in lieu

of a Certificate of Conformance."

31. RECORD RETENTION Among the other recently proposed amendments are those which are intended to reduce record retention requirements from ten (10) years to five (5) years. The original ten (10) year record retention period is preferred, as it is more consistent with other Federal Statutes (i.e. P.L. 92-573) and is more consistent with numerous state laws on product liability. Some states hold manufacturers liable for twelve (12) years from the date of sale, and others ten (10) years from the date of manufacture.

32. As it is recorded in the transcripts of the Fastener Advisory Committee (FAC) Meetings, importers often have sizable inventories of product between five and ten years old. The ten (10) year record retention period reflects the fact that often times distributors sell to end-users fasteners which were manufactured five or more years prior to final sale and use, and that it would therefore be unlikely that the distributor could provide certification if so requested. This would place an undue economic burden on distributors, as they would often have stock for which the certifications are no longer available, thus reducing the salability of their fasteners.

33. Further, the five year record retention requirement would also severely limit the purchaser's ability to audit the supply system after the sale, as the

purchaser will have no idea which fasteners are at, near, or past their respective expiration dates for obtaining certification documents.

34. RECORDKEEPING REQUIREMENTS Yet another amendment is being contemplated for Section 10. It is designed to limit the distribution of laboratory test reports to purchasers of the fastener lots, and is intended to limit opportunities for fraudulent use of test reports. However, as now proposed, it completely fails to serve the customers and users. It now limits distribution to "the" subsequent purchaser rather than "any" subsequent purchaser. As this Section pertains to manufacturers, importers, and private label distributors --- but not to distributors --- the Act will provide no legal obligation for the distributors to either maintain or provide test reports or certifications to their customers who demand them. As most fasteners are sold to the ultimate users by distributors, most users would therefore have no legal recourse under this Act to obtain certification for the lots they purchase. In order for this section to operate as intended, distributors must be added to the list of parties required to provide test reports and certifications when requested or required by purchasers.

35. DEFINITIONS Although the definition of washers covered by this Act has been known for some time to be in error, no attempt to clarify it by amendment has been submitted. Section 3 continues to define the washers covered under this Act in the following manner, "(C) a washer to the extent that it is subject to a

standard or specification applicable to a screw, nut, bolt, or stud..." No washer is subject to a standard or specification applicable to a screw, nut, bolt, or stud. Washers, of course, are subject to standards and specifications applicable to washers.

36. The correct definition for washers to be covered by the Act is, "(C) a washer which bears a grade identification marking required by a standard or specification." This definition is consistent with that used for screws, nuts, and bolts and clearly reflects the intended scope of the Act.

37. LOT SEGREGATION WAIVERS If commingling is ever to be seriously considered, it needs to be done so from the perspective of and be of benefit to fasteners users. Cases may exist where a specific user would wish to waive his right to traceable parts on a purchase by purchase basis as may benefit him. Such a waiver rightly transfers responsibility for the quality of the parts along with any liability to the user's representative, who shall be authorized to underwrite such a transaction. Such a scenario is in concert with the American system of commerce. Such waivers could easily be drafted for efficiency and ease of use, as for example, is done for insurance waivers at car rental agencies.

38. GENERAL RULE ON TRACEABILITY The Fastener Quality Association believes that the following amendment may be necessary to ensure proper representation of fasteners covered by this Act. "No fastener shall be

described, offered, sold, advertised, or otherwise promoted as "traceable", unless such fastener is part of a lot covered by the requirements of this Act, has been sampled, tested, and inspected in accordance with this Act, and has not been commingled, except that such manufacture or such person may commingle like fasteners of the same type, grade, and dimension from not more than two tested and certified lots in the same container during repackaging and plating operations: Provided, that any container which contains like fasteners from two lots shall be conspicuously marked with the lot identification numbers of both lots. Further, no manufacturer, importer, private label distributor, or distributor shall make any statement or reference to conformance or compliance with this Act with respect to fasteners not covered by the provisions of this Act.

39. THE RIGHT AMENDMENTS The Fastener Quality Association agrees that the two original amendments are workable. Attached to this position paper are two amendment options which can deal with commingling. One is restrictive, the other is permissive with adequate control. (See Exhibit "E")

40. This Position Paper has attempted to reaffirm our belief that this Law must remain focused on producing a benefit to the purchasers and users of fasteners, and provides safety and reliability to society at large.

Mr. BROWN. Some distributors are also concerned about the extent to which the campaign to change the Fastener Quality Act has been financed by foreign companies with a vested interest in lowering the quality standards they have to meet to export their wares to the United States.

Mr. Chairman, I have trouble understanding why we are risking making serious mistakes by rushing through changes in the Fastener Quality Act before hearing from all sides. I am certainly willing to do what I can to reform the statute after we know what direction we should be heading.

Most of our Committee membership were not in Congress the last time we held fastener hearings. I hope they share my desire to understand the problem before we have to act. And I urge support for my amendment.

[The amendment offered by Mr. Brown follows:]

AMENDMENT TO H.R. 2196

OFFERED BY MR. BROWN OF CALIFORNIA

Page 13, line 6, through page 20, line 2, strike section 11, and redesignate the subsequent section accordingly.

The CHAIRMAN. Thank you, Mr. Brown. The Chair wishes to state that this particular language is somewhat different from the language that we had on the floor. We have been attempting to work with the industry and with the Advisory Council on these matters. And I must admit that it is a somewhat moving target, as they attempt to deal with some of the issues.

But I am, I am told National Institutes of Standards and Technology does support the amendments that we have in the bill, that these are broadly agreed to by the industry, and that this is something where, if we do not do the appropriate kinds of reforms in this area, that we are going to have a tremendous cost to U.S. business. The estimate is about a billion dollars of cost to U.S. business if in fact we do not approve some of these standards.

I think that where the Federal Government is involved—in regulations that are harmful to the overall profitability of an industry within the world economy, and we have the opportunity to do something here that changes the standards, so that we can be assured of increased competitiveness—I think that's exactly the role of this Committee and exactly what we should be doing.

Now, the gentleman makes the point that there have not been hearings in recent months. As the gentleman well knows, this has been a longstanding question before this Committee that goes back several years, and it has been an evolving kind of issue. What we are doing here is essentially using the processes that the Committee set forward some years ago for understanding the complexities of this problem, namely the Advisory Committee, and trying to bring those issues in front of us with a, with specific language that has been agreed to.

I think it would be a mistake for this Committee today to pull this language out of the bill and thereby consign this language to further investigation, which may in fact result in hundreds of millions of dollars of expense to a very vital industry. And so I would hope that the Committee would reject the gentleman from California's amendment and move ahead with something where industry is very much of a mind that these reforms are needed.

Mrs. MORELLA. Mr. Chairman?

The CHAIRMAN. Mrs. Morella?

Mrs. MORELLA. I just want to echo what you said and point out the fact that NIST, the National Institute of Standards and Technology, has been having many meetings, been in close consultation with the Advisory Board, and feel that this is appropriate in this bill and would certainly favorably assess it.

The CHAIRMAN. Thank you, Mrs. Morella.

Mr. BROWN. Mr. Chairman, may I—

The CHAIRMAN. Mr. Brown?

Mr. BROWN. I just wanted a brief response, but not to preclude other members who may want to talk.

The CHAIRMAN. I yield to the gentleman.

Mr. BROWN. Mr. Chairman, I would be happy if I knew that NIST was supporting this current language. I do not have documentation to that effect, and of course, that may be merely because there hasn't been time enough to get it up here or some other reason of that sort, which is perfectly innocuous.

The last communication I have in connection with this Act was last year's letter from NIST to Chairman, then-Chairman Dingle, expressing opposition to the commingling amendment to the Fastener Quality Act. And I don't know whether that's the same language as we have here, or is different language.

I'm merely pointing out that we really do need to be clear, since our efforts two weeks ago to amend the Act on the floor are now being superseded by another effort to change the Act here in Committee on a separate bill, which hopefully would correct any mistakes we made in then bill that we took up on the floor.

Now, I would like to expedite this process. I'm not trying to delay it. My effort to strike the language at this point would merely allow us a reasonable opportunity to see in writing everything that we have, and who supports it, and who has questions about it. And if we resolve these, we could easily add this as an amendment on the floor.

If you choose to bring this up on suspension, and I think it's worthy of suspension, you could unilaterally add the agreed language before you take the bill up on the floor. And we could deal with it in that fashion. I would not object to that kind of a process.

The CHAIRMAN. Well, I would simply say to the gentleman that NIST has literally been involved in all the drafting sessions on this language. The most recent session they were involved in, it was their hope to be able to get a letter up here today. They weren't certain how they were going to be able to internally take care of that. And therefore, we do not have that letter.

But I want to assure the gentleman that our reason for saying that NIST is in fact in favor of this is because they literally have been sitting with this as the language has been drafted, and have worked with us on coming up with the language that's before the Committee today.

Mr. BROWN. If the gentleman would yield further.

The CHAIRMAN. I'd be happy to yield.

Mr. BROWN. I commend the gentleman for following that course. And normally, having followed that course, I would fully support it. But as you have indicated, I have no personal knowledge of what's taken place here. And I have seen the efforts to remedy this bill fall afoul of circumstances before.

Now, if you choose to oppose my amendment and it's defeated, which is a logical anticipation, I hope that the gentleman would continue to provide, would provide assurance that he will continue to give us the information indicating that NIST has approved this language, and that the major objections from the fastener industry have been addressed in some reasonable fashion.

The CHAIRMAN. Obviously, as soon as we receive any kind of communication of that type, we would share that with the gentleman. The gentleman from Minnesota?

Mr. GUTKNECHT. Thank you, Mr. Chairman. I would like to speak in opposition to the amendment. This is going to sound a bit parochial. I represent in my district one of the largest fastener companies in the United States. And this was brought to my attention last year. And frankly, they told me from a personal business perspective, this law actually works to their advantage. It tends to

fence out certain people, particularly as it relates to some contracts.

But they said, this is another classic example of a $50 solution to a $5 problem. I hope that we can proceed at least with some amendments. As a matter of fact, I think this particular firm would like to see this entire fastener language eliminated altogether. Because they said it really doesn't achieve the goals it was intended to, creates an awful lot of paperwork. And so I hope that we can proceed with the language that is in the bill now, and will vote against the Brown amendment.

The CHAIRMAN. Thank you, Mr. Gutknecht. Are there additional members that wish to be heard on the amendment of the gentleman from California?

Mr. Brown?

Mr. BROWN. Was the gentleman supporting my amendment?

Mr. GUTKNECHT. No, the gentleman was opposing your amendment. I'd like to see the law repealed altogether. And this is only an amendment, apparently that has been agreed to by most of the people who are involved.

Mr. BROWN. I see. Thank you very much for that clarification.

The CHAIRMAN. The Chair will put the question if there is no further discussion. Those in favor of the amendment will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[Chorus of noes.]

The CHAIRMAN. In the opinion of the Chair, the nos have it. The nos have it. The amendment is not agreed to. Does the gentleman have an additional amendment?

Mr. BROWN. Mr. Chairman, I have an additional amendment.

The CHAIRMAN. The Clerk will distribute the amendment.

Mr. BROWN. This is an amendment which I trust will be accepted by everyone. If I can find it.

Mr. Chairman, this amendment clearly expresses the sense of the Congress that the Malcolm Baldridge National Quality Award program offers substantial benefits to U.S. industry and that all funds appropriated for such programs should be sent in support of the goals of the program.

The CHAIRMAN. Would the gentleman yield?

Mr. BROWN. Yes, certainly.

The CHAIRMAN. The Chair is prepared to accept the amendment and know of no opposition to it.

Mr. BROWN. The Chair is very kind. I certainly accept the support.

[The amendment offered by Mr. Brown follows:]

AMENDMENT TO H.R. 2196
OFFERED BY MR. BROWN OF CALIFORNIA

Page 21, after line 19, insert the following new section:

SEC. 13. SENSE OF CONGRESS.

It is the sense of the Congress that the Malcolm Baldrige National Quality Award program offers substantial benefits to United States industry, and that all funds appropriated for such program should be spent in support of the goals of the program.

The CHAIRMAN. I don't want to preclude other people. Is there additional discussion on the amendment?

[No response.]

The CHAIRMAN. If not, the Chair will put the question. Those in favor of the amendment will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[No response.]

The CHAIRMAN. The ayes have it. The amendment is agreed to. Are there any further amendments?

[No response.]

The CHAIRMAN. Hearing none, the question is on the bill, H.R. 2196, the National Technology Transfer and Advancement Act of 1995, as amended. Those in favor will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[No response.]

The CHAIRMAN. In the opinion of the Chair, the ayes have it.

Mr. BROWN. Mr. Chairman, I move that the Committee report the bill, H.R. 2196, the National Technology Transfer and Advancement Act of 1995, as amended. And furthermore, I move to instruct the staff to prepare the legislative report and make technical and conforming amendments and the Chairman take all necessary steps to bring the bill before the House for consideration.

The CHAIRMAN. The Committee has heard the motion. Those in favor will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[No response.]

The CHAIRMAN. The ayes have it, the motion is agreed to. Without objection, the motion to reconsider is laid upon the table.

Mr. SENSENBRENNER. Mr. Chairman?

The CHAIRMAN. Mr. Sensenbrenner?

Mr. SENSENBRENNER. Mr. Chairman, I move pursuant to Clause 1 of Rule 20 of the Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to go to conference with the Senate on the bill.

The CHAIRMAN. You've heard the motion. Those in favor will say aye.

[Chorus of ayes.]

The CHAIRMAN. Those opposed will say no.

[No response.]

The CHAIRMAN. The ayes have it. This concludes the markup of H.R. 2196.

[The Amendment Roster follows:]

COMMITTEE ON SCIENCE

FULL COMMITTEE MARKUP - WEDNESDAY, OCTOBER 25, 1995
10:30 a.m. - 2318 RHOB

AMENDMENT ROSTER

H.R. 2196, the National Technology Transfer and Advancement Act of 1995

--Motion to adopt H.R. 2196, as amended: Adopted by a voice vote.
--Motion to report the bill, H.R. 2196, as amended: Adopted by a voice vote.

No.	Sponsor	Description	Results
1.	Mrs. Morella	En bloc amendment to make technical changes	Adopted by a voice vote
2.	Mrs. Morella	Amendment regarding use of private voluntary standards pursuant to OMB Circular A-119	Adopted by a voice vote
3.	Mr. Brown	Amendment deletes fastener language	Defeated by a voice vote
4.	Mr. Brown	Amendment expressing the sense of Congress concerning the Malcolm Baldrige National Quality Award program	Adopted by a voice vote

EN BLOC AMENDMENTS TO H.R. 2196

OFFERED BY MRS. MORELLA

Page 3, line 2, insert ", through such agreement," after "laboratory shall ensure".

Page 4, line 13, strike "reasonable" and insert in lieu thereof "reasonably".

Page 5, line 15, strike "and".

Page 5, line 22, strike the period and insert in lieu thereof "; and".

Page 5, after line 22, insert the following new subparagraph:

"(D) waive, subject to reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of a collaborating party.

Page 6, line 10, insert "(ii)," after "clauses (i),".

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Page 7, lines 4 and 5, strike "agency whose laboratory" and insert in lieu thereof "laboratory which".

Page 7, lines 14 through 20, strike "employees of a laboratory" and all that follows through "assigning of the inventions" and insert in lieu thereof "laboratory employees who are not an inventor of such inventions but who substantially increased the technical value of such inventions".

Page 13, line 24, through page 14, line 5, amend paragraph (2) to read as follows:

(2) in paragraph (2), by inserting "consensus" after "or any other";

AMENDMENT TO H.R. 2196

OFFERED BY MRS. MORELLA

Page 21, after line 19, insert the following new subsection:

(d) UTILIZATION OF CONSENSUS STANDARDS BY FEDERAL AGENCIES; REPORTS.—(1) To the extent practicable, all Federal agencies and departments shall use, for procurement and regulatory applications, standards that are developed or adopted by voluntary consensus standards bodies.

(2) Federal agencies and departments shall consult with voluntary, private sector, consensus standards bodies, and shall participate with such bodies in the development of standards, as appropriate in carrying out paragraph (1).

(3) If a Federal agency or department elects to use, for procurement or regulatory applications, standards that are not developed or adopted by voluntary consensus standards bodies, the head of such agency or department shall transmit to the Office of Management and Budget an explanation of the reasons for adopting such standards. The Office of Management and Budget shall annually transmit to the Congress all explanations received by it under this subsection.

AMENDMENT TO H.R. 2196

OFFERED BY MR. BROWN OF CALIFORNIA

Page 13, line 6, through page 20, line 2, strike section 11, and redesignate the subsequent section accordingly.

AMENDMENT TO H.R. 2196

OFFERED BY MR. BROWN OF CALIFORNIA

Page 21, after line 19, insert the following new section:

SEC. 18. SENSE OF CONGRESS.

It is the sense of the Congress that the Malcolm Baldrige National Quality Award program offers substantial benefits to United States industry, and that all funds appropriated for such program should be spent in support of the goals of the program.